



MOTOTRBO™ Delivers Integrates GPS, Text Messaging and Voice to Cut Response Times for Tbilisi Medical Emergency Response Service Centre



Leveraging Digital Technology for Fast, Efficient Emergency Services

Named the “033 service” after the country’s emergency response telephone number, Tbilisi Medical Emergency Response Service Centre operates in and around the Georgian capital. The service provides 24/7 emergency medical care for Tbilisi’s 1.3 million citizens from its 120 ambulances and intensive care vehicles.



Tbilisi Requires Advanced Digital Technology while Optimising its Investment in Analogue Radios

Tbilisi Medical was upgrading its fleet to provide new ambulances and equipment for its skilled emergency teams. As part of the modernisation programme, Tbilisi Medical wanted to replace its existing Motorola analogue two-way radios with a digital system. Investing in a leading edge, future-proofed solution would help it save more lives by delivering uncompromising clarity for life-or-death critical communications to improve emergency response times.

In addition to ensuring complete coverage across the city and its outskirts, Tbilisi Medical wanted to combine voice, text and position location services in a single device. Text messaging would allow paramedics and first-aid teams to record and share written details of a patient’s condition, prognosis and recommended treatment. GPS capability would give ambulance controllers a real-time status of each vehicle’s current location and activity to minimise delays in despatching medical crews to the scene of an accident.

Also important was compatibility with the analogue radios used by doctors at the 10 hospitals in and around Tbilisi to where casualties are transported. The service needed a solution that was both affordable and could meet all its communications needs cost effectively. Tbilisi Medical’s long-term supplier and Motorola Licensed Partner recommended MOTOTRBO for its breadth of coverage, unrivalled audio clarity, cost-effective use of spectrum and depth of functionality.

Next-Generation Communications at an Affordable Price

The Motorola Authorised Partner set up MOTOTRBO base stations and DR3000 repeaters at Tbilisi Medical’s two control centres, installed a Motorola DM3601 enhanced display mobile radio in each of the 200 ambulances and built the GPS interfaces. Tbilisi Medical also purchased 60 DP3600 portable display and keypad radios for use by medical response teams working at the scene of an accident or in a patient’s home. The display panel allows users to create and receive text messages, identify callers, scan channels and monitor traffic. The DP3600’s navigation buttons allow rapid access to the radio’s intuitive, menu-driven features and one-touch programmable options. A large, textured push-to-talk button ensures ease of use, even when wearing gloves.

Organisation name

Tbilisi Medical Emergency Response Service Centre, Tbilisi, Georgia

Partner name

Motorola Authorised Partner, Georgia

Industry name

Emergency Services

Product

- DGM 4100 mobile radio (60)
- DGM 4100+ fixed mobile radio with GPS (200)
- DGR 6175 repeater (2)

Solution Features

- Integrated voice, data and GPS
- Communication black spots eliminated
- Optimised route planning and despatching
- 16-hour battery life without recharging

Benefits

- Faster emergency response times
- Expert support from Motorola partner
- Future-proofed platform
- Return on investment in 12 months

“Our Motorola Authorised Partner has been highly responsive to our needs. The Motorola expertise of their consultants and their commitment to meeting our requirements promptly and professionally have made them a preferred partner. We can rely on to help us provide the quality service on which Tbilisi’s citizens depend.”

Tbilisi Medical Emergency Response Service Centre

Unrivalled Performance in a Cost-Conscious Environment.

Tbilisi Medical Emergency Response Service Centre provides ambulance assistance and first-aid support to citizens in the Georgian capital. The Centre purchased Motorola’s MOTOTRBO digital radios to enhance coverage and communications clarity and provide integrated text messaging and GPS functionality. In addition to boosting response times Tbilisi Medical has doubled channel capacity and built a future-proofed platform for incorporating additional functionality.

MOTOTRBO’s support for digital TDMA technology splits a single channel into two virtual channels to provide twice the capacity of analogue. This gives Tbilisi Medical six channels for the cost of three and halves the number of base stations and repeaters needed. Two of the three channels are used to cover the east and west sides of the city, with each one providing voice and data over one virtual channel and GPS services over the other. The third channel is a dedicated emergency response covering the entire city. This has also been split to manage voice/data and GPS.

The Motorola Authorised Partner managed user training for the new MOTOTRBO system. Ambulance crews were quick to learn how to operate the MOTOTRBO Portable with display and became competent users after just 12 minutes training. The eight control room dispatchers quickly adapted to the new system and continue to work closely with MZE to refine channel tuning and define and implement new functionality as they need it.

MOTOTRBO’s backward-and forward-compatible platform means that radios can be switched to analogue mode when ambulance crews need to liaise with hospital staff. Compatibility with analogue allows the migration to digital to be phased in over several years as part of the ongoing upgrade of its two-way radios.

MOTOTRBO’s built-in location tracking functionality has been activated in MOTOTRBO Mobile with alphanumeric display and GPS to give controllers a real-time display of fleet activity. Dispatchers can programme the system to receive the geographical coordinates of each vehicle at pre-programmed intervals, on demand or upon pressing the emergency button. Integrated position location is of critical importance to Tbilisi Medical Emergency Response Service Centre and optimises fleet management, scheduling, route planning and

despatching. Working from accurate real-time information is critical for controllers at the point of decision and helps save time, money and lives.

The robustness of the MOTOTRBO Portable with display, that are also dustproof and water resistant, enables them to withstand sustained rough use in all weather conditions. The long-life battery also helps improve efficiency by allowing emergency crews to use the radios for around 16 hours before recharging is needed.

MOTOTRBO Helps Save Time, Money and Lives

MOTOTRBO has streamlined both routine and emergency call-outs for Tbilisi Medical. The improved speech clarity of digital over analogue means clearer communications, with messages getting through first time, even against the background of traffic in a noisy street. The wider range has eliminated communication black spots at the city limits while integrated GPS has optimised response times. Digital also enables users to make one-to-one as well as group calls, which means that medical crews only receive calls that are relevant to them. MOTOTRBO’s emergency and man-down features ensure that all users are alerted instantly to a colleague in distress or requiring immediate assistance. MOTOTRBO is also highly affordable and meets all Tbilisi Medical’s communications needs at a fraction of the cost of alternative solutions.

Tbilisi Medical is the first emergency response service in the Commonwealth of Independent States (CIS) to purchase MOTOTRBO, but anticipates that others will follow its lead. MOTOTRBO’s advanced digital platform breaks through to new levels of performance and allows organisations to meet their future needs flexibly and cost-effectively. Tbilisi Medical anticipates achieving a return on its investment in MOTOTRBO within 12 months.



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