



UGANDAN CAPITAL UPGRADES COMMUNICATION SYSTEM TO MOTOTRBO™ IP SITE CONNECT

FOR OPTIMAL COVERAGE AND CRYSTAL-CLEAR, RELIABLE COMMUNICATIONS ACROSS THE CITY AND BEYOND



KAMPALA CAPITAL CITY AUTHORITY (KCCA)

Kampala is Uganda's capital city. It borders Lake Victoria, Africa's largest lake. The hills are covered with red-tile villas and trees surround an urban centre of contemporary skyscrapers. Kampala is one of the continent's fastest-growing cities and is now home to 1.7 million inhabitants.

Established by the Ugandan Act of Parliament to replace the Kampala City Council, Kampala Capital City Authority (KCCA) is the legal entity responsible for overseeing Kampala's day-to-day operations. The Authority currently has approximately 1,400 employees. It is located next to the Parliament building in the business district of the city. Kampala is divided into five divisions, each headed by an elected mayor. The Authority's core values are excellence, integrity, innovation, teamwork and customer care. Its aim is to deliver quality services to the city and to ensure Kampala is a vibrant, attractive and sustainable city.

CHALLENGE

KCCA's previous radio network was outdated and could not offer sufficient reliable coverage across the whole city, which meant some users were relying on mobile phones to communicate. Therefore, KCCA launched a tender to find the best digital network that would meet its requirements. Indeed, KCCA was keen to modernise and adopt the latest technologies, such as a radio system with integrated GPS to be able to track its teams for increased personnel safety. A key target of its new system would also be to help improve communications between traffic officers and the Law Enforcement Unit, in order to improve traffic flow in the city and combat the rising issue of traffic congestion.

Samanga Solutions Ltd is a radio network system integrator that provides turnkey solutions. Supplying customers predominantly in Uganda and the greater East African region, it has been a Motorola Solutions Platinum partner for five years. With support from the Motorola Solutions team, Samanga Solutions Ltd met with Kampala Capital City

Authority several times, to showcase its proposed solution built around a MOTOTRBO network and, after extensive evaluation, KCCA chose to deploy the system.

SOLUTION

Using funding from the World Bank under the Second Kampala Institutional and Infrastructure Development Project (KIIDP2), KCCA has installed a citywide MOTOTRBO system that also uses the SmartPTT Control Room application. In addition to radio communications, the control HQ receives images from the city's CCTV network, so dispatchers can access full information about events at street level before deciding the best course of action.

The Motorola Solutions network comprises eight MOTOTRBO SLR 5500 Repeaters, each with a 6dB antenna, installed on towers located across the city. The repeaters are connected together into a single, integrated network using microwave

CUSTOMER PROFILE

Organisation:
Kampala Capital City Authority (KCCA)

Industry:
Government

Location:
Uganda

Partner:
Samanga Solutions Limited

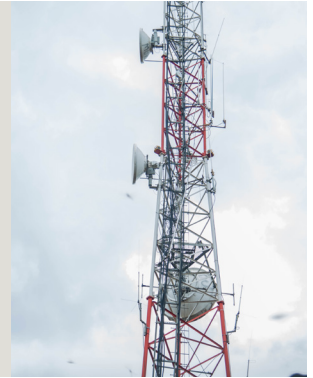


Motorola Solutions Products:

- A MOTOTRBO system comprising:
- 8 MOTOTRBO SLR 5500 Repeaters
- MOTOTRBO IP Site Connect
- MOTOTRBO DP4401e and DP4401 Portable Two-way Radios
- MOTOTRBO SmartPTT Enterprise
- IMPRES™ batteries and chargers
- Bespoke Motorola Solutions Service Contract

“For any public project it is essential to keep a keen eye on investment and maintenance costs, without compromising performance. KCCA originally invested in this long term solution with a view of improving communication on the transportation network; however because this system has numerous benefits, the enforcement team, the ambulance services team, KCCA security team and all the other emergency services now also operate on this same MOTOTRBO system. In the future, we intend to upgrade the system to monitor and optimize public transportation operations and traffic management schemes, as we strive to serve our citizens better. Above all, the system operates at 100% at all times and has low maintenance costs, which is important for a government entity like ours that must minimize recurrent costs.”

Eng. Jacob Byamukama, Deputy Director Roads Management, Kampala Capital City Authority

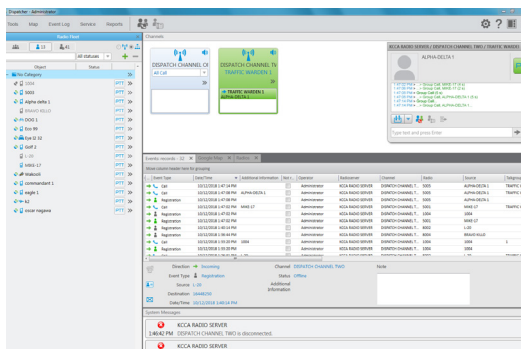


point-to-point links to ensure a strong radio signal with full coverage across the entire area, despite the seven hills on which the city is built. Samanga Solutions Ltd has installed a duplexer alongside each antenna, which allows transmitting and receiving through one single antenna without mutual interference and has helped in reducing footprint and cost. Radio coverage has also been extended beyond the metropolitan area to outlying suburbs such as Wakiso, Entebbe and Mukono, by connecting five outlying, previously installed MOTOTRBO repeaters to the main system via MOTOTRBO IP Site Connect.

There are currently eight talk groups set up on the MOTOTRBO system, including the law enforcement department, traffic wardens and ambulance, refuse collection, maintenance and technical services teams. Priority calling is set up in case of incidents, for example for ambulance teams, whose system links into the traffic team's systems for optimal route clearance. Indeed, the majority of radios are deployed within the traffic department for road traffic management; this is vital for the coordination of traffic on Kampala's main roads. The dispatcher can see where the traffic jam is using cameras installed in the city and can issue instructions via radios to allow officers to direct cars, for example, in the instance of a traffic light malfunction.

The DP4401e portable radios are equipped with Motorola Solutions' unique IMPRES batteries that are automatically re-conditioned as necessary during charging to power through a full shift and to ensure maximum lifetime.

KCCA uses the SmartPTT Enterprise dispatch application to initiate, monitor and crosspatch calls, to manage job



ticketing and to track the location of the radios and users via the radios' integrated GPS. KCCA also now records all voice communications and can run detailed call logs and call volume reports, as well as monitoring system diagnostics.

BENEFIT

The deployment of the MOTOTRBO radio system has delivered numerous benefits for KCCA. Calls are instantaneous, unlike communications over GSM or the previous radio network, which saves valuable seconds on every call. Moreover, long-term costs have also been saved, as there are no ongoing mobile phone charges or third party providers involved.

KCCA has also seen a notable improvement in worker efficiency and productivity, thanks to clear communications; dispatchers can track staff and deploy those closest to incidents or traffic accidents and other issues. This has significantly reduced response times and improved traffic management, which was a key driver when KCCA was considering which radio network to deploy. Record-keeping and call recording are ensuring enhanced traceability and accountability. The reliable communication, as well as added features such as GPS and the emergency button integrated into the MOTOTRBO DP4401e, is increasing personnel security as personnel can call help immediately to their location.

KCCA has invested in a long-term radio solution and is already reaping the benefits of MOTOTRBO IP Site Connect, which has enabled KCCA to simply extend seamless voice and data communication capability beyond the capital city to outlying suburbs with minimal expenditure. Looking forward, there are plans to further upgrade the system to MOTORBO Linked Capacity Plus which will allow greater call capacity as KCCA expands the use of the system and adds to a steadily growing number of subscribers.

Tom Mayengo, Network Administrator, KCCA, summarises: “Our previous network was rather limited and we faced numerous challenges. However, since we have deployed the MOTOTRBO system from Motorola Solutions, we have come along in leaps and bounds in our ability to communicate effectively during incidents and emergencies. Communications on the radio network are 100% reliable and unparalleled in terms of volume and effectiveness. We hope to continue to reap the benefits of the MOTORBO system well into the future.”

Applications:

- Private calling and group calling over 8 talk groups across Kampala and beyond
- Emergency calling (including for the law enforcement department, traffic wardens and the emergency team)
- Priority calling for ambulance teams
- Call recording
- Job ticketing
- Call volumes and radio location reporting
- GPS for vehicle and personnel tracking

Benefits:

- Improved coverage across the whole metropolitan area, including outlying suburbs
- Users can now work more efficiently and productively due to reliable, clear communications and instantaneous calls
- Significantly improved traffic management around Kampala City
- Emergency button, calling and GPS tracking improves personnel security
- Reduced cost versus communications previously run primarily on a CDMA cellular network
- Improved record-keeping and monitoring of system availability and usage