



# MANAGING 340,000 M<sup>2</sup> OF REAL ESTATE WITH MOTOTRBO™

LINKED CAPACITY PLUS NETWORK FOR CENTRAL MILAN, ITALY



## PORTA NUOVA, MILAN

Hines is a privately owned, international real estate firm. It has investment, development and management projects in over one hundred cities worldwide. This includes the Porta Nuova project in Milan, one of Europe's most prestigious mixed-use city centre developments.

The Porta Nuova area spans 340,000 m<sup>2</sup>, and Hines wanted reliable voice communications throughout to efficiently manage the site and oversee security. After reviewing the technical options, including GSM, it opted to deploy a MOTOTRBO™ Linked Capacity Plus network. The decision was based on the all round strengths of the network including the clarity of voice calls, scalability, and ability to provide reliable voice communications both above and below ground. The solution was delivered in conjunction with Saitel Telecomunicazioni srl, who has been a Motorola Solutions Channel Partner and application developer for over 30 years.

A number of user groups can communicate together instantly on the network. These include property, engineering, safety, call centre, security, cleaning, parking, maintenance and landscaping teams. The network has enhanced communication across the development and improved worker efficiency. Based on the success of the system, Hines is looking at installing MOTOTRBO networks in other projects.

### CUSTOMER PROFILE

**Organisation:**

Hines Europe: Porta Nuova

**Industry:**

Facilities Management

**Partner:**

Saitel Telecomunicazioni srl

**Motorola Solutions' products:**

- 6 MTR3000 Base Stations/Repeaters
- MOTOTRBO Linked Capacity Plus
- 75 DP 3600 and DP 3400 Portable Two-Way Radios, number growing constantly
- 2 DM 3600 Mobile Two-Way Radios

## CASE STUDY

PORTA NUOVA, MILAN: MOTOTRBO

**“We were instantly comfortable with the name Motorola Solutions; we have not been disappointed. The MOTOTRBO network has grown hand in hand with the construction of the Porta Nuova development and will continue to expand to meet demand. The digital two-way radio system enables our people to communicate through immediate and reliable communications wherever they are, to ensure the safe and efficient management of the site. User feedback has been excellent too.”**

Steve Murphy, senior engineering manager, Hines Europe



## THE CHALLENGE

Hines had to create its own radio network as there was no accessible radio systems in the area, and GSM could not be used as coverage was insufficient in some areas and non-existent underground.

Hines faced two principal challenges. Firstly, users needed to communicate clearly throughout the site without having to change the radio channel and against high levels of background noise. This was no small challenge: the plot covers a total of 340,000 m<sup>2</sup> and includes parks and green spaces, as well as multiple levels below ground housing car parks, shops and technical rooms. Hines also needed a reliable signal throughout the 37 buildings in the project. These include Italy's tallest building and other offices, residential sites and retail blocks.

Secondly, it needed a communications system that was quick and easy to install and activate, as well as being fully scalable, to grow as the site expanded.

And, ideally, Hines also wanted to centrally manage its fleet of radios: to specify user groups, add accessories, such as a man down option board, and to program modes of communication on a radio-by-radio basis.

After investigating the option of using an enhanced GSM coverage network, it chose to deploy a MOTOTRBO Linked Capacity Plus network. Hines concluded this was the only solution that could meet its requirements, especially with regards to scalability and fleet management.

## THE SOLUTION

Saitel installed a MOTOTRBO Linked Capacity Plus network, comprising six MTR3000 repeaters. Four are located inside various buildings throughout the site for internal coverage, and the external area is served by two further repeaters installed on the top of two tall buildings alongside two omnidirectional antennas. The repeaters are all interconnected: externally via radio microwave links and internally via cabled Ethernet LAN Networks already built into the office blocks' infrastructure, with cabling running vertically through the buildings. The four internal repeaters also connect to 10 km of leaky feeder cables,

which are fastened with special clamps and spacers to the ceiling wire ways on each level below ground. This ensures reliable coverage in the 150,000 m<sup>2</sup> underground area.

Following installation in each zone, users tested the coverage between different floors and underground and exterior locations. Workers found that using the DP 3600 and DP 3400 radios, they could communicate clearly from anywhere in the area. The two DM 3600 radios are used by security staff as centralized base units in control rooms.

Hines established a radio fleet management table by user group, defined in the following categories: property, engineering, safety, call centre, security, cleaning, parking, maintenance and landscaping. Each radio is individually programmed. All users can make emergency calls, however, only specified users in senior management are able to make private calls. Sixteen radios used by the safety and security teams are equipped with the MOTOOnBoard Man Down option board manufactured by Saitel.

There is presently just one radio frequency used for voice communications; however, MOTOTRBO's two-slot TDMA allows two simultaneous conversations within this channel. And as Hines receives regular requests from external contractors working on the site to join the network, it may well expand channel capacity in the future, as well as looking at extended capabilities of the system, such as GPS and data transfer. The radio fleet is also constantly growing.

## BUSINESS BENEFITS

This deployment ensures clear and reliable voice communications, which are essential for the efficient operation of this prominent city-centre development. The network will grow, as building continues, particularly in light of the forthcoming Expo 2015 International Fair, which will be staged nearby.

Audio quality is exceptional; communications are fast, reliable and clear, inside, outside and underground. Hines is now considering MOTOTRBO networks for its future real estate development projects across Italy.

### Applications:

- Voice communications between teams throughout the different site zones, including external and underground areas
- Individual, group or emergency calls
- Man down
- Fleet management

### Key Benefits:

- Reliable communication across extensive area
- Clear communications outdoors and underground
- Scalable network
- Speed of installation
- Easy to use and maintain
- Increased staff productivity and safety
- Overall increased site management and security

For more information about how MOTOTRBO can improve communications and the safety of your operations, please visit [www.motorolasolutions.com/mototrbo](http://www.motorolasolutions.com/mototrbo) or access our global contact directory at: [www.motorolasolutions.com/contactus](http://www.motorolasolutions.com/contactus)

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