Indonesian Mine Enhances Coverage, Capacity and Services Thanks to Hytera DMR XPT System

Introduction

PT QMB New Energy Materials needed to upgrade its legacy analog radio system at its nickel and cobalt mining and processing plant in Morowali in Central Sulawesi. Hytera's DMR XPT system not only delivered the wider coverage, increased capacity, better audio and real-time location services required, but it was also able to support mixed analog and digital radio fleets, so the transition could be done at a speed that suited the customer.

The Background

The Morowali nickel sulphate and cobalt metal plant is located in Central Sulawesi, Indonesia. The plant is owned by PT QMB New Energy Materials, a joint venture between several large recycling companies mostly based in China and Hong Kong. The QMB plant is situated in Morowali Industrial Park

Customer Name
PT QMB New Energy Materials

Time
2023

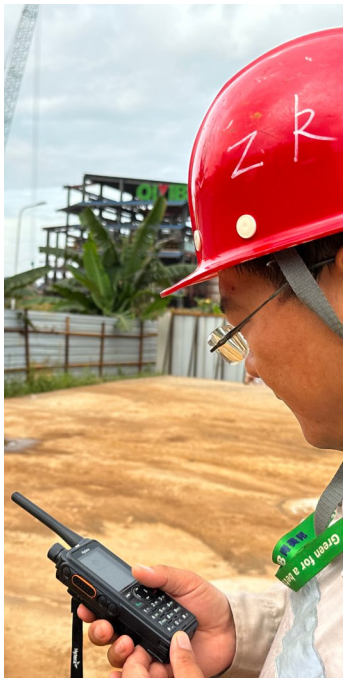
Project Location
Sulawesi, Indonesia

Industry
Mining

Products

XPT DMR Communication System
HP5 DMR Hand Portable Radios
HP7 DMR Hand Portable Radios
HM7 DMR Mobile Radios
SmartOne Dispatching System

and covers an area of one hectare. It takes low-grade laterite nickel ore as the raw material and uses a high-pressure leaching technology to process the ore to completely recover the nickel, cobalt and manganese from the mine.



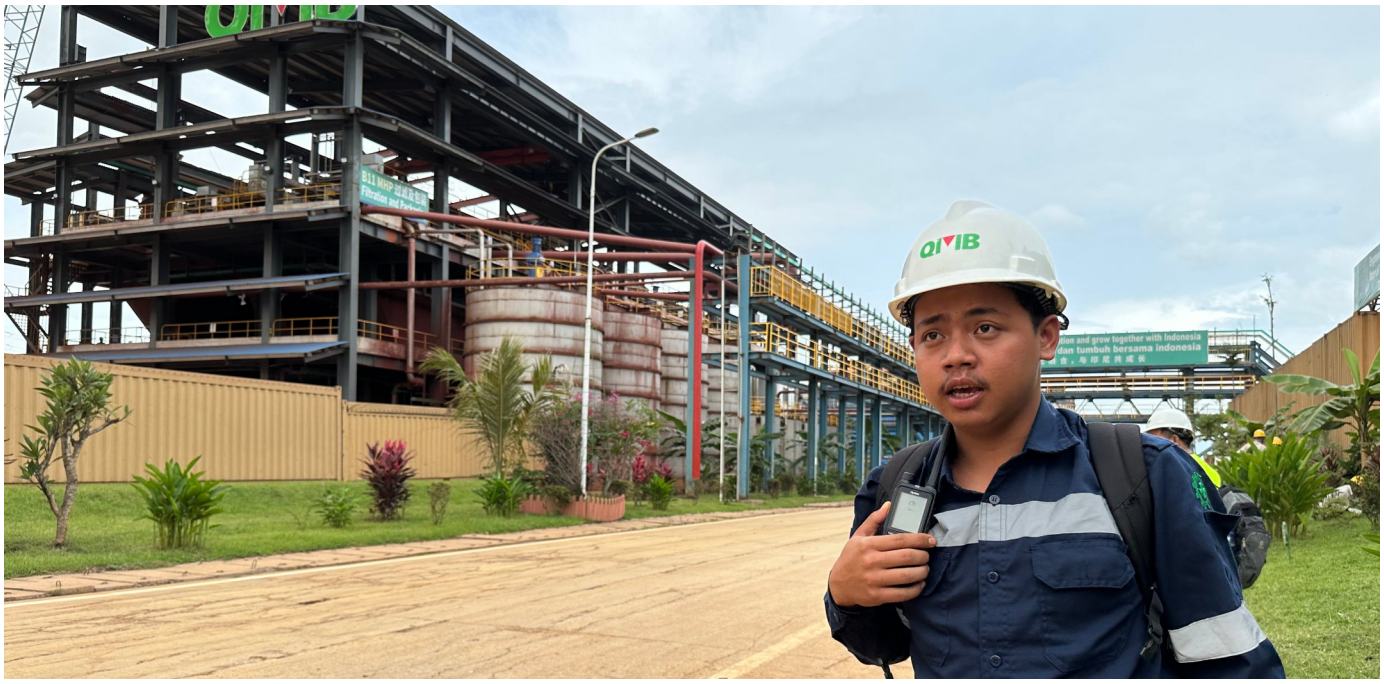

The Challenge

The QMB plant previously used analog radios for its communications, but as the plant expanded many problems emerged. The analog radio network was no longer able to provide coverage across the entire plant and the audio quality was poor. Another problem was that the devices only had a short service life and were easily prone to damage, which meant constant repairs and replacements had to be arranged.

QMB decided it had to completely upgrade the plant's radio network by deploying a unified digital communication system for its 2,000-plus employees working across the different departments at the Morowali plant.

However, during the replacement process, QMB was keen to prolong the use of its current analog radio investment and gradually upgrade and replace them in phases. This meant the new digital radio network had to be able to interconnect with the existing analog radio network.

In addition, QMB also required the new radio network to support location services so it could see the exact position of vehicles and personnel in real time. This would enable the company to better manage and dispatch resources in both daily operations and in emergency situations.



The Solution

Hytera provided a Digital Mobile Radio (DMR) solution comprising its XPT system, HP5 and HP7 hand portable and HM7 mobile two-way radios, and a SmartOne dispatching system.

The customer chose Hytera's XPT (Extended Pseudo Trunking) multi-site digital radio solution to solve the signal coverage problem and capacity issues, along with its ability to meet the wide-ranging call needs of its multiple departments. The DMR radios support individual, group, broadcast, emergency, priority, and direct calls between radios, so they are highly versatile.

Hytera's DMR SmartOne dispatch system provides a comprehensive, unified communication platform able to support both analog and digital radios. It offers a wide range of professional functions, including dispatching, voice calls, GPS positioning services, messaging functions, voice recording, AVL and camera monitoring, all through one intelligent interface.

Products

- XPT DMR Communication System
- HP5 DMR Hand Portable Radios
- HP7 DMR Hand Portable Radios
- HM7 DMR Mobile Radios
- SmartOne Dispatching System

The Benefits

Cost-effective Solution

XPT combines the advantages of DMR Tier II conventional systems with the properties of larger Tier III trunked radio systems. XPT automatically assigns available radio channels, so users do not have to manually select a channel or queue if the system is busy. XPT does this without the need for a channel controller, making it a very cost-effective choice.

Back-to-Back Gateway

The Hytera Back-to-Back gateway solution enables seamless communication between existing analog radios and the new DMR network, aiding the transition from analog to digital products.

SmartOne Dispatching System

The SmartOne dispatching system enables QMB dispatchers to intuitively monitor the location of personnel and vehicles through the dispatching client interface. This enables dispatchers to manage resources more easily and efficiently.

Electronic Geofencing

The solution includes the capability to set up electronic geofences, which enhances staff management, safety and security by triggering alerts if anyone crosses a designated boundary.

Tough, Reliable, Durable Radios

Mines and industrial processing plants are tough environments. The HP5 and HP7 series of hand portable devices are built to withstand dust, heat, shock, and water submersion. The HP5 devices are IP67 and MIL-STD-810G certified, while the HP7 ones are even more durable as they are IP68 certified. Both feature loud, clear audio, so vital messages can be heard even in noisy environments, and have a long battery life of over 20 hours.

This comprehensive DMR solution provided by Hytera encompasses signal coverage improvement, location tracking, efficient dispatch, enhanced staff management, and a smooth transition strategy from the legacy analog system to the new digital radio network.

Hytera
Respond & Achieve

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