

# **Fluency and Coverage**

Hytera Synergies Mexico Cement Company Successful

User La Cruz Azul Cooperative, Mexico

Market segment Manufacture

Project time

**Products** Hytera XPT Digital Trunking System PD78XG Portable Radio



### **Background** >>

In 2016, Guillermo Álvarez, president of La Cruz Azul Cooperative, which comprises 12 companies, announced in an interview with Expansión that "as part of the modernization process of its four plants, the cement company will invest 300 million dollars over the next four years." ICT modernization is being carried out by the integrator Ingeniería en Redes y Sistemas (INREDSIS), replacing obsolete analog radios with portable Hytera PD78XG digital radios.

# Customer's Challenges

The most complicated in this implementation was to obtain the economic resources. Technology advances constantly, and sometimes people in the financial area do not understand the scope of these devices or how helpful they can be in all departments for better communication. "But through the support of the staff who are involved in the system, we demonstrate that it is a technology that solves the plant's needs and that we can visualize in the future. We managed to make them see it as an investment and not as an expense, explains Julián Luis Velázquez Rangel, Head of Control and Industrial Computing of La Cruz Azul Cooperative.

The existing analog radios had already begun to fail very frequently and the customer had to discard them because they couldn't get spare parts. They need to create a habit throughout the staff, especially at management levels, to use the radio not only to communicate by voice, but by text, to mark a new way of living inside the plant, well communicated with all the digital systems that they can have.

Velázquez concluded: "We were able to convince them to allocate a budget thanks to the benefits of the new system, such as the possibility to send messages, locate radios and people, besides the GPS that will be installed. They were made to see that these radios will allow us to enter the digital system and coexist with all the technology in which we are investing."







#### Hytera Solutions 🛸

The customer took longer to make comparisons of where they were going and to check that the technology matched their needs. After considering several technology alternatives, they decided that Hytera had the complete solution for their objectives. Its proposal was much faster; we saw the service it offered and some other benefits such as the robustness of the equipment, especially its tightness, which prevents the finest cement dust from getting into those radios.

The cement company had an analog trunked system with 4 carriers, which were sometimes exceeded by the voice traffic required for its operation and other services required. When migrating to a digital XPT trunk system from Hytera, the system doubled its capacity by having 4 carriers, with two slots or traffic channels each. And without the need for a control channel, they can even increase the number of work groups without seeing the capacity of the system diminished. Hytera system implemented is the basis for integrating it to telephony, paging in different parts of the plant and an emergency system throughout the plant.

## **Benefits of Hytera Solution**

With newly built Hytera system, La Cruz Azul have greater fluency in communicating what is happening outside in the field with central control. They will be able to connect with cell and local telephones from the plant switchboard and also have paging by radio frequency. They can reduce costs in wiring and pipelines and have greater coverage in each of the units for any action depending on the needs of each department.

La Cruz Azul engineers say that this implementation is likely to be replicated at the other plants to cover several communications at a time with few frequencies. The idea is to have a system in each of the plants to connect them with each other and probably with the corporate offices, with all the horizontal companies of Cruz Azul.

With Hytera, La Cruz Azul has airtight equipment (IP 67), resistant to the very fine dust in the environment of the cement plant, to water, etc. Besides, they have greater coverage (up to Tula and in tunnels inside the plant). They also include GPS, which will soon allow geolocation, to detect, for safety reasons, whether a worker is in a dangerous area where he should not be. Hytera radios also support telemetry, that is, from the radio, they can obtain data such as temperature and positioning, which can be integrated into managed systems that will serve to know whether the processes are being adequate or need to be improved.

# Voice from Customer 🛸

"In the search for an alternative, we reviewed several companies. We found that the Hytera radios could give us what we already had, and they are prepared for what we want to implement in the future." — Julián Luis Velázquez Rangel, Head of Control and Industrial Computing of La Cruz Azul Cooperative



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