

# The Borough of Marghera, Italy



## SUMMARY

### • LOCATION

Marghera, Italy

### • FACILITY SCOPE

A borough of Venice, Italy

### • OBJECTIVES

The borough required an emergency alert system to inform residents of potential toxic leaks from chemical facilities in the area.

### • BIAMP SOLUTIONS

Community™ and Vocia™

### • OUTCOME

By implementing Biamp's loudspeakers and emergency alert solutions, Marghera residents can rest easy knowing they'll be informed of any accidental leaks.

### • EQUIPMENT

- Community horn and driver systems
- Community RSH-462 loudspeakers
- Vocia VA-8600 amplifiers
- Vocia AM-600c power modules

One of Venice's six boroughs, Marghera, Italy boasts a population of approximately 30,000 people and includes a large industrial port called Porto Marghera, which handles production activities such as petroleum refinery, metallurgy, and electrical services. While the industrial facilities that process and store chemical materials have their own alarm and warning systems, Marghera's citizens were understandably concerned about potential danger.

The Servizio di Protezione Civile of Venice approved an acoustic alarm system to instantly alert residents should harmful toxic pollutants be released into the air. This system would cover a wide area with no chance of failure in an emergency. The C.V.R. (Consorzio Venezia Ricerche) had recently completed a flood warning system for Venice's Tidal Forecasting and Signaling Centre. While that experience proved beneficial for this project, they still faced challenges.

"The main problem derived from the fact that Marghera has few high buildings and we had to cover a very wide area," said acoustical expert Umberto Nicolao, who managed the project's design. "The city's houses have maximum two floors, not useful for implementing the concentrated acoustic diffusion system I had in mind."

## SOLUTION

For products and technical support, Nicolao worked with Ennio Prase of Prase Media Technologies, while network engineer Gabriele Ferrari built the architecture for the communication system. Sofitel, based in Treviso, Italy, managed the installation. The team decided to use Marghera's water tower as the system's central location. Standing 54 meters high, it was the best structure available. However, the city's lone skyscraper stood nearby, so they couldn't send a high-level acoustical signal in that direction.

According to Nicolao, 30 Community horn and driver systems on the water tower. "I chose this horn and driver combination because of the maximum SPL data and the sufficiently narrow beamwidth," said Nicolao. "I oriented the system in such a way that the skyscraper direction was outside the sound beam."

To manage and control the signal and power amplification the team selected Biamp's Vicia VA-8600 amplifiers, which meet Europe's EN 54-16 and EN 60849 safety standards and are capable of distributing processing and page routing through the network, eliminating the possibility for faults in the system. Vicia AM-600c power modules were utilized for driving the loudspeakers. The sound system also features five sub-locations with four Community RSH-462 loudspeakers apiece in a multidirectional configuration.

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## CONCLUSION

Developing the acoustical warning signal itself had to account for many factors. Ambient noise in parts of the city, as well as atmospheric conditions, could make it difficult to hear. On the other hand, the team didn't want a sound so loud it might unnerve the residents. Several professionals with specialized expertise contributed to the project to ensure correct balance.

Since implementing the warning system, Marghera residents feel safer knowing a solution is in place. Specially designed to continuously monitor its status, the system ensures that any problems are signaled and addressed immediately. Based on its success, according to Nicolao, the nearby city of Vicenza subsequently decided to develop a similar solution for river flooding emergencies.



## ABOUT BIAMP

Biamp® is a leading provider of innovative, networked media systems that power the world's most sophisticated audiovisual installations.

Recognized worldwide for delivering high-quality products and backing each one with a commitment to exceptional customer service, Biamp's mission is connecting people through extraordinary audiovisual experiences.

Founded in 1976, Biamp is headquartered in Beaverton, Oregon, with offices and manufacturing facilities located around the world.

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