EVAC
sound evacuation systems

MOZZANICA
WORLDWIDE FIRE FIGHTING SOLUTIONS

Evacuate public spaces **safely**

Mozzanica has introduced an integrated, scalable and high-performance audio alert solution for the firefighting sector that makes it possible to safely evacuate public places, in accordance with UNI CEN/TS 54-32:2015.

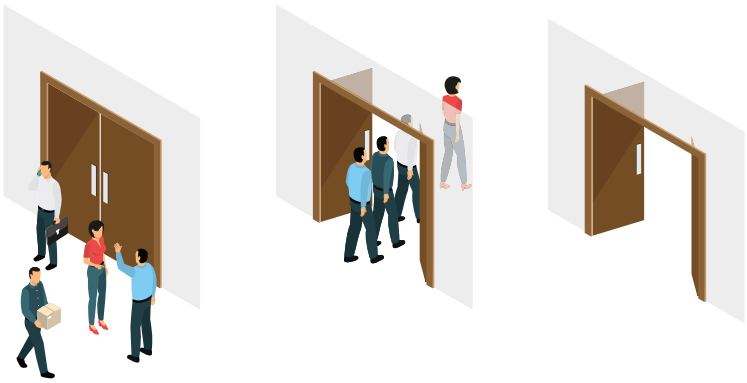
What are **EVAC** sound evacuation systems?

Sound evacuation or EVAC (Emergency Voice Alarm Communication) systems are **advanced electro-acoustic systems** consisting of a network of loudspeakers and optical signals, used to **transmit and broadcast pre-recorded or live emergency voice messages**, in order to **organize and speed up the evacuation procedures** of people from buildings and public spaces.

These systems are essential when dangerous situations such as fires and other types of emergencies occur and can be activated either automatically or manually by an employee.

Provide the correct information for **rapid evacuation**

EVAC voice alarm system



Traditional optical/acoustic alarm system

Behavioral studies have shown that people have faster reaction times when the information they receive about an emergency is more understandable.

The risk assessment of the environment to protect is carried out in the design phase by the bodies in charge and is defined in the EN54 standards that specify the requirements, the test methods and the performance criteria for voice components; **this allows designers to correctly plan the dimensions**, volumes, arrangement of speaker lines, redundancy, escape routes, types of message, intelligibility of voice content, languages to use, sound power level, etc.

In the case of message broadcasting methods, **integrative transmission methods** can also be introduced, such as optical signals in very noisy environments (train stations, stadiums, etc.) or inductor loop systems for hearing aid wearers.

Mozzanica and Bosch: **a winning combination**

Mozzanica has identified a highly performing and scalable system that is **compliant with the international standards EN 54-16 and ISO 7240-16**, in which the operational versatility and a high level of redundancy ensure uninterrupted operations of the audio systems in any emergency situation and with one of the highest market standards.

A Certified FIRE-EVAC Installer, Mozzanica's **partnership with Bosch Security** is built on quality, competence and technological innovation in voice evacuation and EVAC/sound broadcast systems to communicate with the public in safety applications, with particular adherence to national and international regulations governing the Fire Prevention sector.

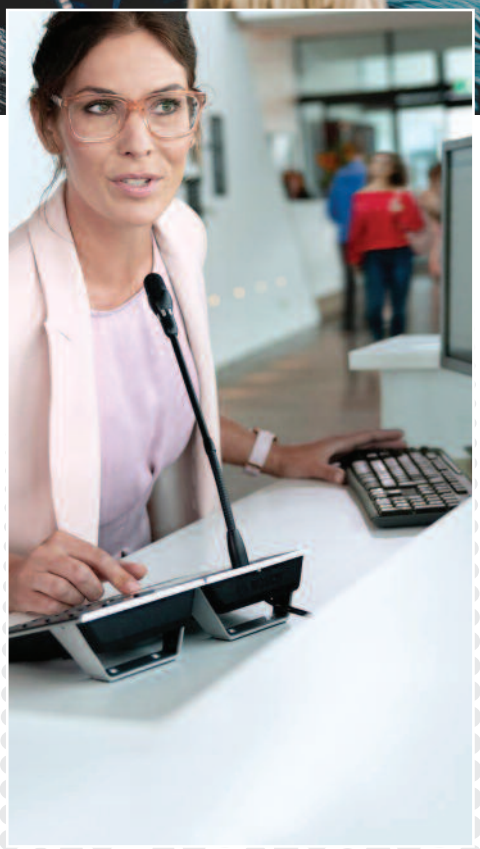
Versatile, **scalable** and reliable

The **fully digital fiber optic technology** used in the evacuation systems permits complete design flexibility of the entire system, a high level of loop redundancy to ensure the system operates even if physical damage to the fiber optic cable occurs, and audio free of electromagnetic interference.

The systems are fully programmable and interfaceable with other security systems and thanks to the decentralized network architecture, it is possible to expand or remodel the configuration thanks to plug and play technology.

The advantages

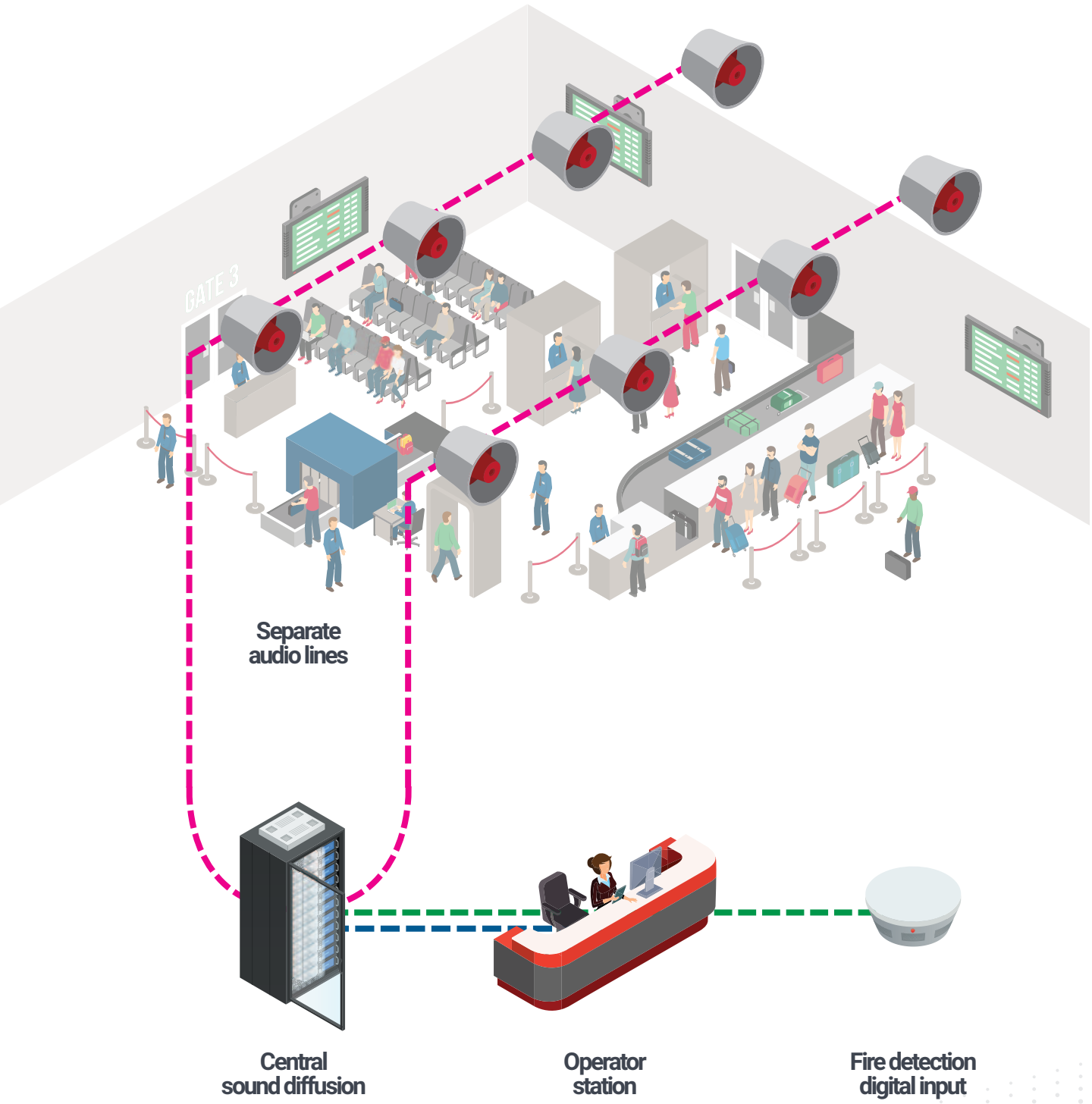
- Reduction of the time it takes for the user to perceive the emergency
- Orderly management of evacuation flows
- High design flexibility and scalability
- Can be integrated with other security systems
- Fully Programmable
- Monitoring of the system, controls and operations of all components
- Simple setup and ease of use
- Reduced ownership and maintenance costs



All systems are self-protected thanks to the RSTP (Rapid Spanning Tree Protocol) communication protocols that automatically recover IP audio links in the event of a network connection interruption.

For installations over long distances or in multiple sites, communication takes place through Ethernet LAN networks or WAN (Wide Area Network) with perfectly synchronized Audio Over IP (AOIP) transmission technology that is set apart by its high quality.

The components of an EVAC system



Main **applications**

As there is no unambiguous definition of the buildings in which an EVAC system is required, applications are defined based on risk classification according to regional or provincial regulations, most often Fire Department commissions.

In general, if a firefighting system is required for a public space or a place frequented by the public, an EVAC system must also be provided.

- Shopping malls
- Mixed-use buildings
- Factories
- Hospitals and health care structures
- Exhibition and congress centers
- Cinemas and theaters
- Churches and mosques
- Hotels and restaurants
- School buildings
- Sports facilities and stadiums
- Airports
- Power plants
- Oil & gas
- Galleries
- Metros
- Train stations
- Cruise ships

Legislative and regulatory **provisions**

The current regulations in force specifically define the characteristics of an electro-acoustic system for evacuation and emergencies that satisfies the safety and reliability requirements.
The system must be **designed and installed in accordance with UNI ISO 7240-19**, while the **equipment must comply with UNI EN 54-4, 54-16, 54-24** and with the provisions already defined in the Fire Prevention Code for each type of application.

In cases where a public space is also a "workplace", both the emergency provisions relating to the space and those relating to workplaces will apply.
It is the responsibility of the client (Ministerial Decree 37/08 and Legislative Decree 81/08) to choose the authorized installation company and to adopt and maintain the safety measures required by law.

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