



## **Supporting expansion: Bosch protects university in Turin with public address and voice alarm system**

August 2019

With a history dating back to the year 1859, the Polytechnic University of Turin is Italy's oldest technical university. The expansive historic campus includes landmarks such as Valentino Castle as well as the completely renovated Cittadella Politecnica complex, offering over 170,000 square meters of modern facilities. Attended by over 33,500 students, Politecnico di Torino provides degree courses in the fields of Engineering, Architecture and Industrial Design.

Over the past years, the Politecnico saw rapid expansion due to growing demand for degrees in Engineering and related fields. Latest additions to the university include three offsite buildings outside campus areas one and two: The Design and Sustainable Mobility Citadel, plus the newly remodeled Lingotto building and Fiat manufacturing facility. To ensure the safety of students and staff in these buildings, officials in Turin needed to expand existing safety infrastructure. This proved challenging not only because of the complexity of the architecture and vast distances between buildings, but the additional need to comply with EN54-16 voice evacuation regulations. For this, the Politecnico needed to implement a certified public address and voice alarm system.

As a satisfied customer for almost 20 years – the first ever PRAESIDEO system in Italy was installed at the Politecnico in 2001 – the university called on Bosch to secure the new additions with the PRAESIDEO Digital Public Address and Voice Alarm System. Certified by security standards such as EN 54-16 and ISO 7240-16, PRAESIDEO provides a scalable solution for safety applications spanning several locations, including campuses. It handles message routing, emergency voice evacuation, local amplification for lecture halls and other functions on a single platform. The system's daisy-chain network topology also supports expansions in a flexible and highly scalable manner.

The experts needed to accommodate for the complex architecture on campus – a mix of new construction and historic remodels – and integrate the three new locations with the existing Bosch solution. The result is a PRAESIDEO Public Address and Voice Alarm solution featuring eight network controllers, 80 basic amplifiers (a variation of 500 W, 2x 250 W, and 4x 125 W amplifiers) and ten call stations. The two PRAESIDEO Call stations at the main entrances of campus areas one and two work together with the PRAESIDEO

PC Call station client software; the other eight PRAESIDEO Call stations are distributed among the other campus buildings.

From a safety operator's point of view, this integration provides a big picture perspective of the entire campus and the ability to address a variety of loudspeaker zones separately in each building. For clear audio, installers added 1,500 Bosch loudspeakers plus sound projectors that match the interior design of the modern Politecnico campus. All selected loudspeakers are EN 54-24-certified, making the solution fully EN 54-compliant. Inside the facility buildings, the loudspeakers are a mix of water-protected wall mount metal cabinet speakers and LC1 modular ceiling loudspeakers for speech and music reproduction. Outdoor campus areas, sheltered or not, are covered by water- and dust-protected horn speakers as well as bidirectional and unidirectional sound projectors.

The installed PRAESIDEO Network controllers allow staff to manage the public address and voice alarm functions on a centralized platform. In emergencies, the system supports voice evacuations. The efficient evacuation starts with occupants closest to the threat – addressed by pre-recorded voice messages – then moves on to adjacent floors and areas. The voice evacuation instructions achieve time savings of up to 30 percent for emergency responders.

Having passed inspection in early 2019, the PRAESIDEO solution safeguards the campus expansion in Turin with a fully EN 54-certified safety solution.

“We are very happy with the system, especially thinking about the complexity of the university and its expansion,” said Andrea Carbonatto, Facility and Security Manager at Politecnico di Torino.

As a fully scalable, upgradable and expandable system, the Bosch solution is ready to accommodate the university's future growth and has proven an important reference project in Turin and beyond.

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