

# UPDATE

## Early Earthquake Warning System At the „German School Max Uhle“ in Peru-Arequipa 03.04.2025



## The initial situation of the project

The German School got the earthquake early warning system with a public warning siren in June 2013. Since the system has not generated any false alarms to date, and has not triggered an alarm even for earthquakes of lower intensity, security technicians have now successfully performed an update and maintenance on the system. For this purpose, a threshold value board was installed in the Master device, and both devices (Master and Submaster) received new software. Additionally, a maintenance switch was installed that deactivates the public siren during maintenance or testing of the earthquake system.

Following this, additional smaller indoor sirens will be installed and connected to the maintenance switch.

The TABD central control unit was installed in a siren control cabinet.

*Siren-Cabinette TABD*



*Master in a protection case*



*Service Switch*



## New hardware and software include:

Alarms and information about the system status,

- triggered threshold values (8),
- in case of a communication problem between the sensors (COM ERROR),
- permanent sensor self-test OK/ Fail
- maintenance switch ON/OFF

*Public Warning sirene*



*Technical room for Early Earthquake Warning System*

## Alarm

Only when both earthquake detectors report a destructive earthquake does the system send an alarm to the public siren, and within a fraction of a second, 1,200 students and teachers are warned.

**After the update, a test alarm was conducted with the students and teachers!**

**Important to know:** The „secty lifePatron“ system was developed with the GeoForschungsZentrum Potsdam for the detection and analysis of the first primary wave. In addition, the earthquake early warning system was tested for the second destructive S-Wave according to the European standard TS12884 (Turkish Standards) and certified by TÜV, which in turn is based on the American guideline ASCE 25-06 and ASCE 25-97 (American Society of Civil Engineers Standards).

At the same time, further tests were successfully conducted on a so-called shaking table in India and Iran.