

ABSTRACT

The smart noise monitoring system implemented in the frame of the LIFE MONZA project

One of the main goal of the LIFE MONZA Project, which started in September 2016, is to reduce the average noise levels present in the Libertà district by means of both top-down (creation of a limited traffic zone to forbid the access to trucks, limitation of vehicles speed, lanes-width reduction and pedestrian crossing introduction, substitution of the current asphalt with a silent one) and encouraged bottom up actions (pedibus service, ideas contest for the logo of the Project and development of an App). In order to monitor the noise levels trends before and after the interventions implementation, both smart and traditional noise monitoring systems have been designed and installed. The smart monitoring system consists in 10 low cost noise monitoring units installed in strategic position in the Libertà district, acquiring the noise time history, every second, of the LAeq parameter in broadband and of the Leq in 1/3 octave bands. The transmission system on board of each control unit is designed to guarantee a minimum transmission time per hour to a central server unit from which data can be visualized in almost real time, elaborated and downloaded.

The smart monitoring system was first tested for two months in correspondence of the Polo Scientifico of Sesto Fiorentino and then installed in the Libertà district of Monza where it started to collect data from June 2017.

In July the first noise measurement campaign with traditional noise monitoring systems was carried out, while the second one is foreseen in November 2017.

In this paper the structure and the positioning of the smart noise monitoring system is presented, together with indications about how data can be visualized in the server. Moreover, first results obtained after the first smart monitoring period are illustrated.