

Abstract

The Monitoring Guidelines of the Lombardia Region in Italy [†]

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On 14 August 2018, 43 people died in the collapse of the Polcevera bridge in Italy. Beyond the human tragedy, this event reminded us all of the degrading state of critical transport infrastructure in the EU. A few months after the tragedy, Regione Lombardia signed a collaboration agreement with Politecnico di Milano to develop criteria for the informed management and planning of interventions, aimed to keep the regional asset at the required performance level. One of the outcomes of the project are regional monitoring guidelines and their application to nine pilot bridges. The document provides guidance for the design of monitoring systems as decision support tools for problems relevant to maintenance and emergency management, occasional safety assessment, and standardization. In the MoRe regional guidelines, the design process of a monitoring system is approached as a stepwise procedure that originates from the needs of the decision-maker and comprises: (a) preliminary investigation to acquire knowledge about the specific bridge and the deterioration process to monitor; (b) the identification of the indicators able to provide information about the structural performance (deterioration processes, actions, and environmental conditions); (c) the selection of the technical devices to manage (acquire, process, transmit, and store) the monitoring information. During the lecture, the content of the guidelines and the nine pilot monitoring systems installed as demonstrators will be illustrated.

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