

MAGNITUTOR®

IL PRIMO VERO TUTOR SISMICO
www.magnitutor.com

(MAGNITUTOR®, THE FIRST REAL SEISMIC TUTOR)



"You can no more win a war than you can win an earthquake."

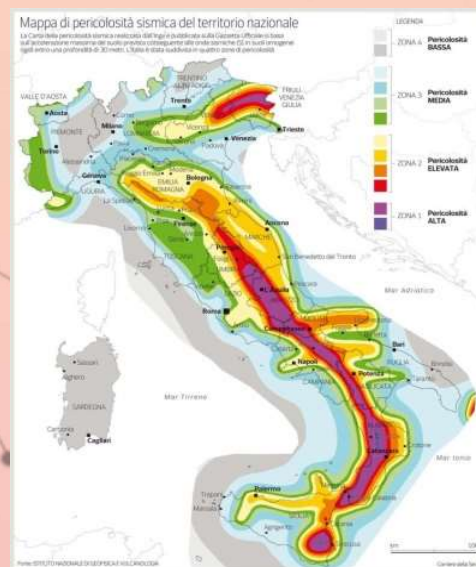
Jeannette Rankin (1880 – 1973) - elected to the U.S. House of Representatives during WW1 and WW2.

Despite the most advanced scientific knowledge, it is still impossible to be able to predict an earthquake and the effects of its potential destructive action. Therefore, it is very difficult, referring to a seismic event, to setup any kind of preventive measures.

However, in many countries, laws impose the need to demonstrate evidence of having implemented as much as possible any effective protective measure and suitable action, by applying risk management and risk reduction processes in order to mitigate the devastating consequences of a seismic event, such as:

- improvement of construction techniques for new buildings:
 - the current Italian Construction Technical Standards (D.M. 17/01/2018) establish cogent construction requirements, also determined on the basis of the
- the use of consolidation and performance improvement techniques for existing structures:
 - carbon fiber applications and pultruded plates;
 - insertion of passive suppression systems;

seismic risk assessment carried out by the I.N.G.V. nationwide.



- performance analysis related to construction techniques applied on old buildings and monuments:
 - uncertainty about materials and construction techniques;

- peculiar and/or different behavioral characteristics among the sub-sections of the same building;
- emergency and evacuation plans:
 - compliance with plans issued by government, regional, local authorities;



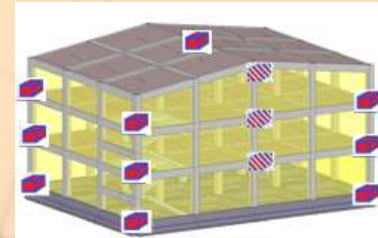
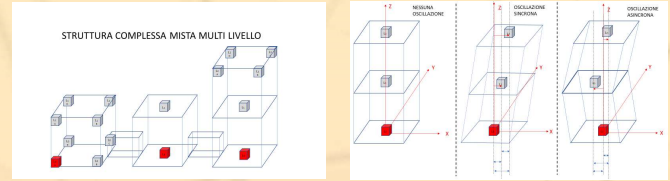
In this context, the **MAGNITUTOR®** system ranks as the most innovative, economic and effective seismic risk management tool, conceived to help Managers and Post-Holders during all phases of Decision-Making.

The **MAGNITUTOR®** system is able to:

- allow continuous seismic risk management through real-time monitoring of the structure's seismic performance by means of continuous data acquisition and processing;
- generate a wide variety of signals in real time, from a simple advisory to emergency warnings, as soon as an earthquake occurs with such intensity to be considered a potential or real danger for structures and occupants;
- activate devices, sub-systems or execute software routines that can be configured according to any automation level and working with any new or existing system, in compliance to customer requirements;
- Provide information and functionality through software or mobile applications;
- consider, as far as possible, the peculiar features of the structures on which it is installed;
- record and provide real time data for decision-making processes, such as the activation of plans or the execution of emergency procedures;
- minimize the time required for post-earthquake investigations and technical assessments, thanks to massive data stored on remote servers;
- share bi-directional information through the network with systems installed on other facilities, using "Machine Learning" techniques, in order to continuously improve the level of reliability of the system;
- allow full remote monitoring of the operational status of the system for maintenance management.

The **MAGNITUTOR®** system consists of fully automated "Smart Grid" wireless modules connected into a network, powered by both the electricity grid and backup batteries.

The number of modules to be installed varies from structure to structure and is determined by means of specific safety assessments conducted by highly qualified professionals. Since it is a 100% patented proprietary technology, all functions can be defined and configured in order to comply with any customer requirement or technical need.



The **MAGNITUTOR®** system is usually offered to customers with a loan for use contract *: a "one-off" cost for the initial installation and a monthly fee for the services, the amount of which is determined based on the type of options chosen. It is all included in the fee: normally the customer pays only for the service and does not incur any additional cost for routine maintenance or any software and hardware updates.

Without prejudice, therefore, the due respect of all the directives issued by the authorities in charge of safety (e.g. Civil Defense, etc.), when an earthquake occurs, the **MAGNITUTOR®** system permits an extremely fast and effective decision/making in activating safety measures or emergency procedures, operating sub-systems and devices and allows the highest level of safety and protection of people.

(*: for more details refer to the GSC - General Supply Conditions)

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