



RE.SIS.TO.

**RESISTENZA
SISMICA TOTALE**

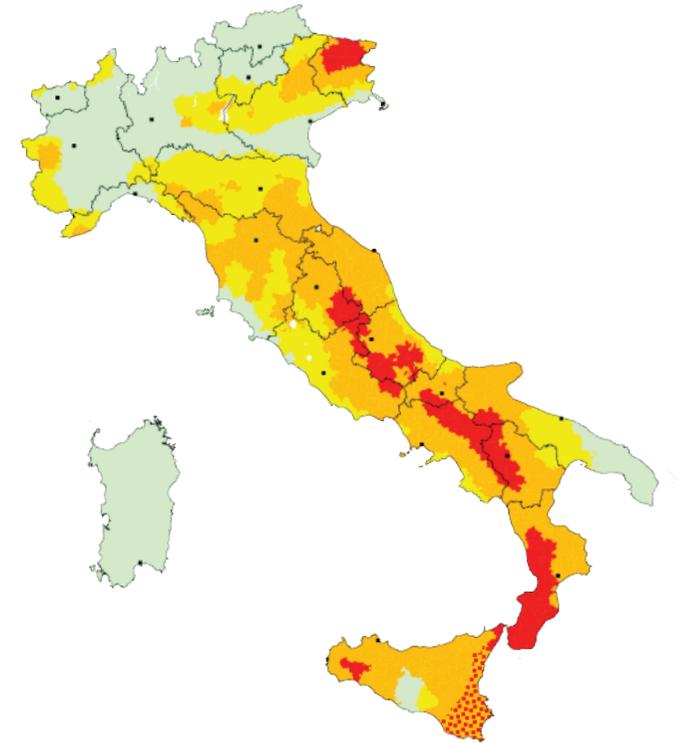
WHAT IS IMPORTANT TO KNOW?

SECURITY must correspond to the degree of knowledge of a building's behaviour in the event of an earthquake.

Italy is considered an entirely seismic country and is classified in **four different classes of seismic hazard** in relation to the geographical area.

Currently we do not have the ability to understand where and when an earthquake will occur, but **we can know how the building will respond and grant security.**

KNOWING IF A BUILDING IS SAFE CAN PREVENT CATASTROPHIC SITUATIONS.



SEISMIC RISK

DANGER

IF

Probability of an earthquake occurring in a specific geographical area.

+

EXPOSED VALUE

WHAT

Everything that could be destroyed or damaged due to an earthquake.

+

VULNERABILITY

HOW

A building's propensity to suffer damage when an earthquake occurs.

HOW CAN YOU VERIFY A BUILDING'S SEISMIC STATUS?

COMPARATIVE TABLE OF EXISTING METHODOLOGIES:

SPECIFICITA'	STATIC VERIFICATION		DINAMIC VERIFICATION				
	Observation	Static Suitability	Simplified	Expeditious	RE.SIS.TO.	NTC '18	Conventional
Refereces	X	D.M. 15/05/1985 D.M. 20/09/1985	MIT n.58 del 28/02/2017	!	Linee guida Reg.Toscana e Marche (GNDT/CNR di II)	D.M. 17/01/2018	MIT n.58 del 28/02/2017
Asserts the static	X!	X	X	X	X	✓	✓
Asserts dynamism	X	✓	X	✓	✓	✓	✓
Refers NTC'18	X	X	X	✓	✓	✓	✓
Inspection is necessary	X	X	X	✓!	✓	✓	✓
Has expendable references	X	✓	✓	X	✓	✓	✓
Allows comparability	X	X	✓	✓!	✓	✓	✓
Time commitment ING	3 dd.	2 dd.	3 dd.	2 dd.	4 dd.	90 dd.	120 dd.
Identifies critical issues	!	X	X	!	✓	✓	✓
Network and training courses	X	!	!	X	✓	✓	✓
Controls the method application	X	X	X	X	✓	✓	✓
Performs RSPP / HSE obligations	X	X	X	X	✓	✓	✓

Legend:	
✓	Yes
X	No/Not applicable
!	Specific cases

To understand stability in terms of weight and loads in the absence of seismic events.

To verify the seismic vulnerability with the final objective of understanding its behaviour in the presence of a seism.

RE.SIS.TO. DOES NOT REPLACE THE STANDARDS BUT ALLOWS YOU TO HAVE A CLEAR QUANTITATIVE AND QUALITATIVE COMPARATIVE PICTURE OF THE BUILDING HERITAGE.

RISK ASSESSMENT

SEISMIC VERIFICATION

"The obligation of seismic verification of all strategic works and those susceptible of significant consequences in case of collapse"
OPCM n.3274, 20th March 2003

PUBLIC BUILDINGS

Artistic buildings
Historical buildings
Cultural buildings



STRATEGIC AND RELEVANT BUILDINGS

Emergency management
Health and education
Transport and infrastructure
Significant crowding



PRIVATE BUILDINGS

Homes
Workplaces
Warehouses



CODICE CIVILE

Art.2087 - Libro quinto del Lavoro

"The entrepreneur is obliged to adopt measures that, according to the particularity of the job, the experience and the technique, are necessary to protect the physical integrity and moral personality of the workers."

SAFETY AT WORK: HSE

The employer has responsibility if the building where his employees work is damaged and puts the safety of people at risk.

"The management of health and safety at work also takes into consideration the constructive, structural and map aspects that affect the buildings that host workplaces, the " seismic risk " is one of the elements that companies, and services of prevention and protection keep in mind for the safety of people and the protection of property and the environment".

Italy's HSE September 2017

WHAT IS THE RE.SIS.TO. METHOD?

RE.SIS.TO. is an expeditious and simplified method for **the assessment of the seismic vulnerability** of a building. It was developed by the **Università di Bologna** for the **Città Metropolitana di Bologna** to evaluate in a short time and with low costs real estate numerous and heterogeneous assets.

RE.SIS.TO. has been developed informatically into a cutting-edge **multiplatform software**.

WHAT'S IN RE.SIS.TO.?

STEP 1

ANALYTICS: PROCESSING AND SUMMARY DATA

Search for historical material, inspections, survey, photographs, pacometric and sclerometric investigations.

STEP 2

QUANTITATIVE: REPORT PGAc / PGAd

Definition of a peak ground acceleration that would cause the building to collapse using statistical formulas and appropriate mechanical considerations.

STEP 3

QUALITATIVE: LOCAL VULNERABILITIES

The experience of our **RE.SIS.TO. CERTIFIED ENGINEER** allows us to locate these vulnerabilities and resolve them.

SCHEDA DI SINTESI



COMMITTENTE: REGIONE PIEMONTE
INDIRIZZO: CORSO GALILEO FERRARIS 341, 10135 TO

Classe Re.Sis.To.®	0
Prezzo edificio	4170.0000
Coefficiente di rischio	0.9937
Accelerazione spettrale	0.1000
Accelerazione spettrale ridotta	0.1000
PGA	0.1000
Rapporto PGAc / PGAd	55.5810



THE RESULT IS DIGITALLY PRODUCED IN A CLEAR, HOMOGENOUS AND SIMPLE FORMAT, INDEPENDENTLY OF THE PROFESSIONAL OR THE BUILDING, WHICH FACILITATES COMPARING AND UNDERSTANDING OF THE CRITICALITIES DETECTED AMONG DIFFERENT ASSETS.

WHAT DO WE OFFER?

RE.SIS.TO. PROJECT is a **revolutionary and innovative service** based on an engineering method developed in the university field (**Università di Bologna**), widely recognized for the expeditious analysis of property vulnerability, then tested and implemented both in public administration and in the private world.



Nowadays **RE.SIS.TO. PROJECT** is accessible through an **IT platform**, after participating in a specific training course, which allows to support the professional's work in assessing the degree of seismic vulnerability of individual buildings as well as vast Real Estate assets.



IT IS SIMPLE

It is possible to know the result of the vulnerability test and to easily learn with our chromatic colour classification, the seismic resistance classes of **RE.SIS.TO.**

5 VULNERABILITY
CLASSES

IT IS FAST

The mobility given by a Tablet or Smartphone allows the establishment of a **RE.SIS.TO.** class immediately after the inspection.

AVERAGE OF
3 WORKING DAYS

IT IS COMPETITIVE

Getting meaningful results in just a few days saves time and money for both professional and the client.

SAVE MORE THAN 80%
OF YOUR BUDGET.

NETWORK

Pre-compiled reports generated right after the analysis allow for an easy comparison even when generated by multiple professionals.

HOMOGENOUS
OUTCOME

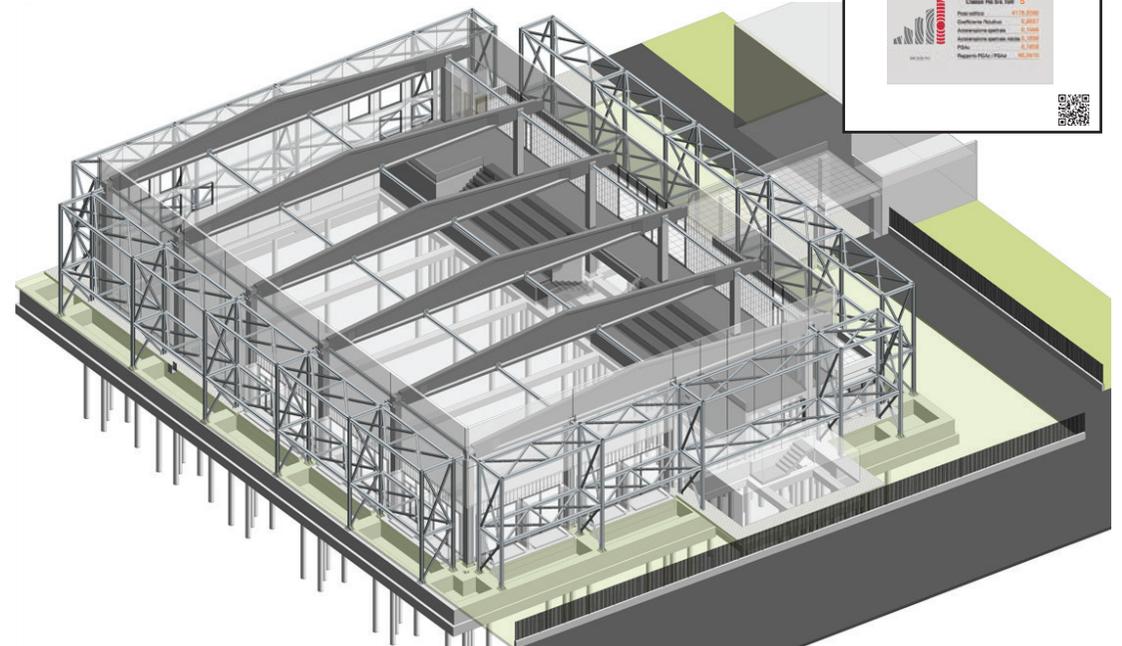
WHAT HAPPENS NEXT?

In case the resulting class is **yellow**, **orange** or **red**. Which are the following steps?

IMPROVEMENT OF VULNERABILITY

PRIORITY OF INTERVENTION

SEISMIC ADAPTATION



IT IS POSSIBLE TO IMPROVE LOCAL VULNERABILITY COLLECTED DURING THE SURVEY AND ADJUST YOUR BUILDING SEISMICALLY, THROUGH TECHNOLOGIES AND SYSTEMS PROPOSED BY LEADER OF THE INDUSTRY AND PARTNER OF **RE.SIS.TO.**

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GET IN TOUCH WITH US:

www.resistoproject.com

