

Maximize your **construction site** safety

The complete solution for **static SHM, dynamic SHM** and **geotechnical and environmental monitoring**

• Pre-construction • Temporary works • Excavation and foundations • Structural Health Monitoring • Pre-construction • Temporary works • Excavation and foundations



Nearby buildings stability

Settlement, inclination, deformation, cracking, and environmental factors



Nearby buildings vibrational analysis

Vibration velocity, frequency, amplitude, duration, direction, modal analysis, and acceleration



Excavation pit stability

Inclination, lateral pressure, deformation, and support forces



Ground deformation

Soil movement, groundwater level, strain, and settlement

Smart construction site monitoring with dynamic and static wireless IoT sensors



ACCELEROMETER

Frequencies and modal shapes

Carry out the Operational Modal Analysis (OMA) of the building by synchronizing Accelerometers to identify relevant vibration modes and their evolution over time.



VIBROMETER

Vibration analysis

Measure vibrations of structures around a construction site to increase safety and to comply with state regulations.



SINGLE CHANNEL NODE + CRACKMETER

Crack monitoring

Measure the expansion and contraction of the fissure pattern and cracks that may occur as a result of strong vibrations.



GATEWAY



TILTMETER

Retaining walls stability

Monitor the stability of the retaining walls inside the excavation pit to ensure safety and prevent delays.



SINGLE CHANNEL NODE + STRAIN GAUGES

Steel struts deformations

Monitor the deformation of the steel reinforcement of the building under construction and the deformation of the underlying concrete floor.



SINGLE CHANNEL NODE + PIEZOMETER

Water pressure and level

Monitor the interstitial water pressure and changes in groundwater level to optimize construction efficiency.



SINGLE CHANNEL NODE + INCLINOMETER TUBE

Rock and ground stability

Monitor the stability of the rock wall and surrounding ground at the excavation site, measuring slope to identify landslides, rockfall or settlements.



VIBROMETER

Vibrational peaks

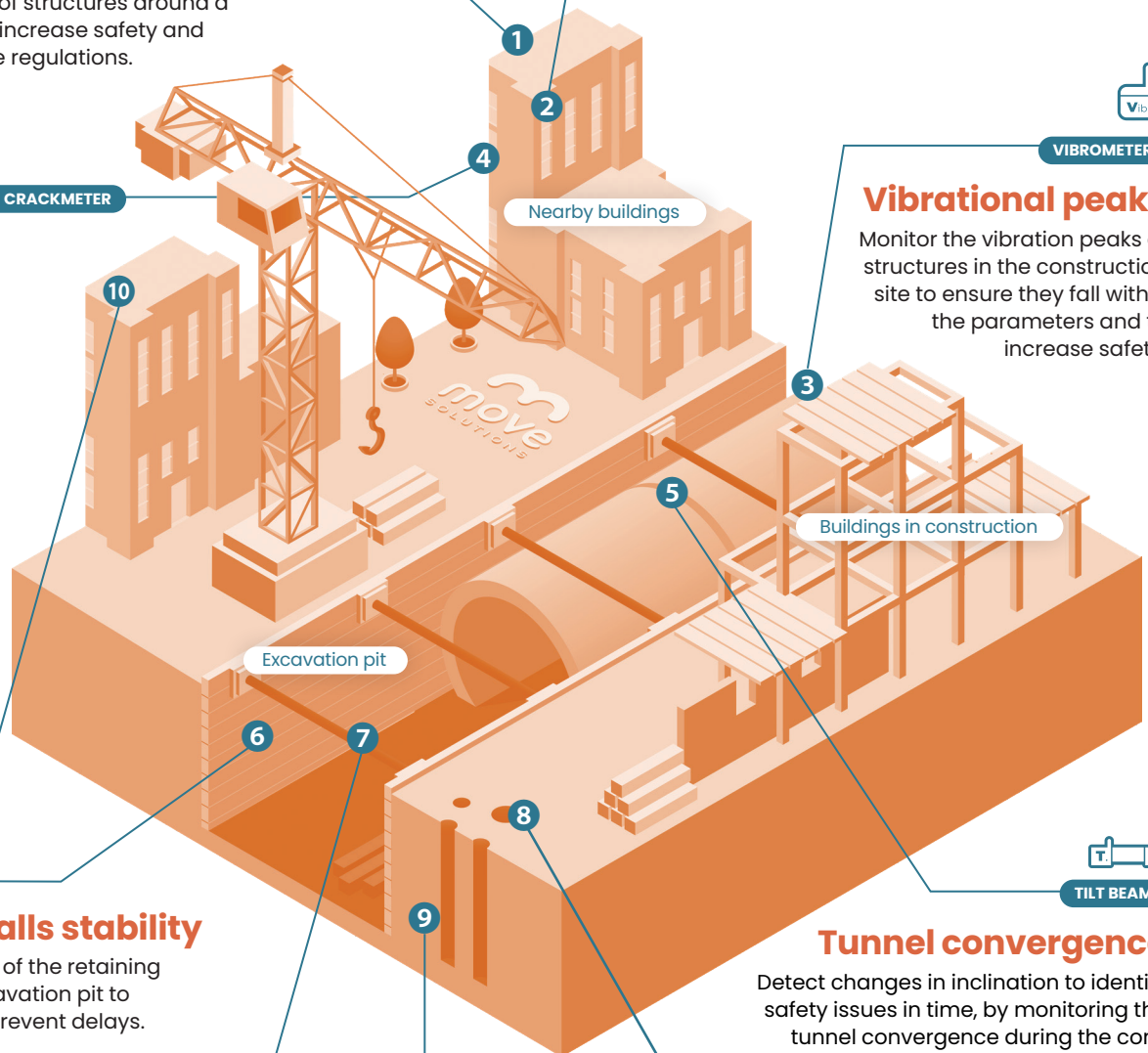
Monitor the vibration peaks of structures in the construction site to ensure they fall within the parameters and to increase safety.



TILT BEAM

Tunnel convergence

Detect changes in inclination to identify safety issues in time, by monitoring the tunnel convergence during the construction phase.



Wireless sensors for construction site monitoring

• Pre-construction • Temporary works • Excavation and foundations • Structural Health Monitoring



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ACCELEROMETER

Measure acceleration (mg) and frequency (Hz) on three axes, synchronizing devices for modal analysis.



1 3

VIBROMETER

Measure triaxial vibration parameters with complete analysis of speed (mm/s or inch/s), frequency and amplitude of the vibrations.



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TILTMETER

Measure rotation, ground deformation and triaxial tilt changes, with the option of synchronizing devices to better assess the stability of structures.



4 7 8 9

SINGLE CHANNEL NODE

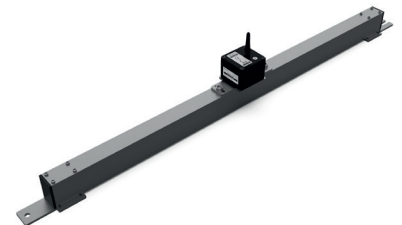
Make geotechnical and environmental probes suited for wireless communication and receive alarms for threshold breaches.



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GATEWAY

Collect data measured by the sensors and transmit them to the MyMove IoT Platform where they will be processed and analyzed.



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TILT BEAM

Measure the degree of slope or tilt over a larger area with a series of Tiltmeters attached to a bar.

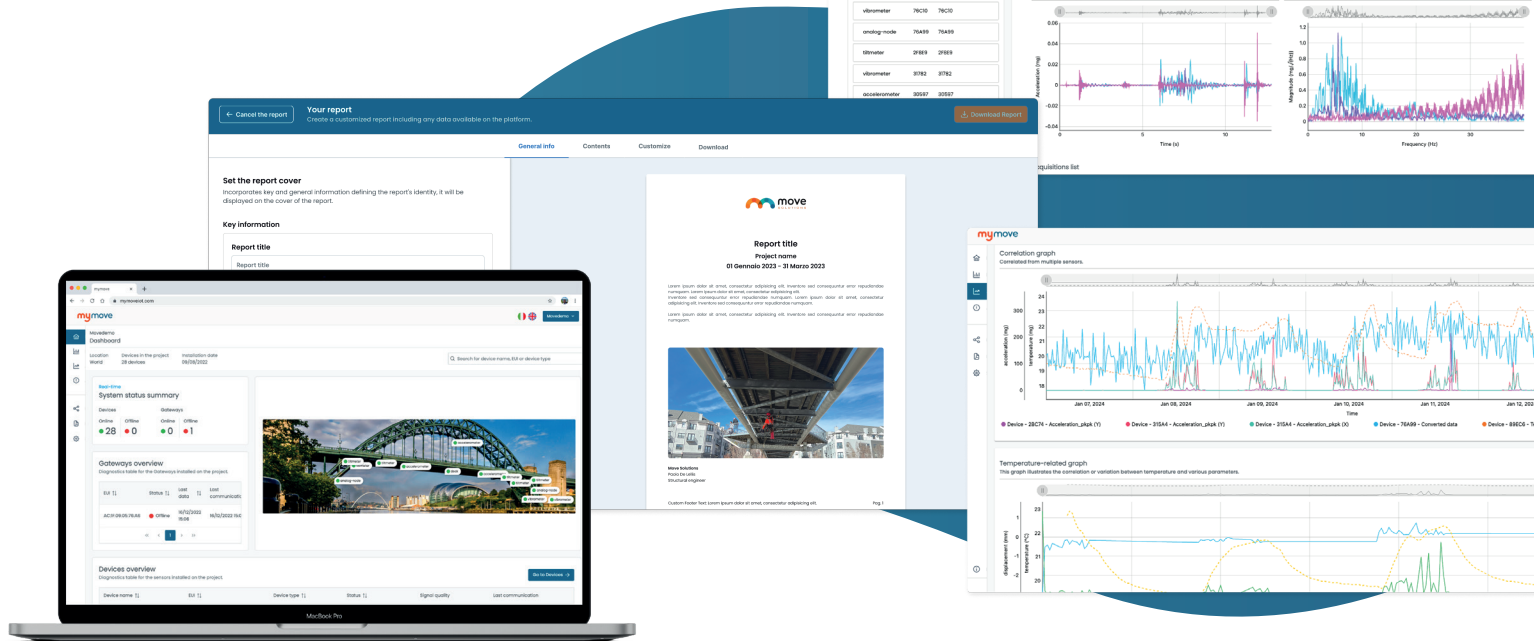
All our sensors are **battery-powered** and they measure **temperature**.

CASE STUDY

Construction site • Taff's Well, UK

As part of the Transport for Wales rail system, wireless **Tiltmeters**, **Tilt beams** and **Accelerometers** were installed to monitor a sheet pile wall used during the construction of a new bridge. The devices send data about the structure 24/7, to identify changes in the structural behaviour and prevent failure after the removal of the sheet piles.

my move IoT PLATFORM



All-in-one

Comprehensive structural analysis
for efficient monitoring

User-centered

Designed to meet and anticipate
your needs

Intuitive interface

Clear and simple design for a
smooth user experience



Manage

Efficiently oversee your projects with ease, monitoring **multiple structures** through a single account. Configure **multi-level severity alarms** for proactive risk management, ensuring timely responses to potential issues and improving the safety of your structures.



Explore

Delve into **historical data**, accessing comprehensive **trends** and detailed **acquisition lists**. Uncover hidden patterns and anomalies for a complete understanding of your structure behavior, aiding in predictive maintenance and strategic planning.



Analyze

Interpret complex data with **advanced analytics**, **comparing graphs** and generating **customized reports**. Transform them into actionable insights, for informed decision-making and improved longevity and safety of your infrastructure.

Be in control of your
structural monitoring,
anywhere you are.

Discover all the features
available on **MyMove IoT Platform**



Smart Structural Health Monitoring

A comprehensive solution

Our Smart Structural Health Monitoring (SHM) system offers a complete solution that helps detect potential issues before they become critical, ensuring the safety and longevity of structures.



Wireless system

Avoid expensive and complex installations thanks to battery-powered, LoRaWAN-based and long-lasting devices.



Remote monitoring

View all sensor-collected data on our MyMove IoT Platform, accessible from any computer at any time.



Threshold setting

Configure sensors according to your needs to receive automated alerts of threshold breaches.

Static SHM

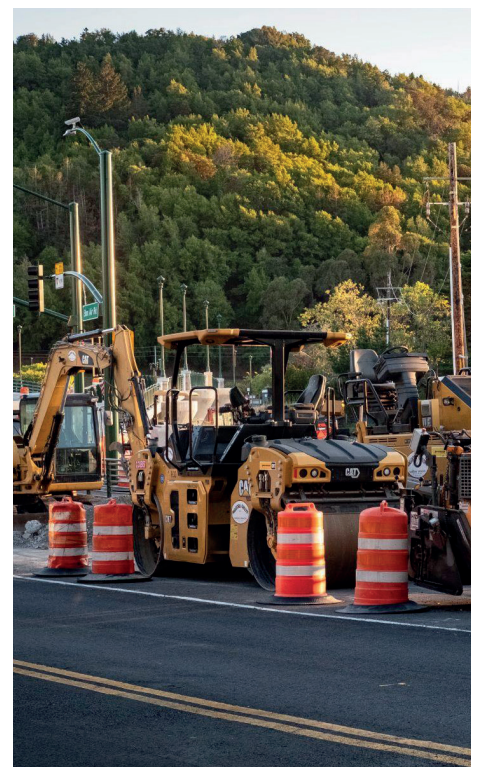
Static structural health monitoring measures slow-varying parameters over a long period of time, such as inclination, rotation, static displacement, and crack monitoring. This type of analysis is appropriate for structures that are subject to gradual load changes.

Dynamic SHM

Dynamic structural health monitoring is used to handle dynamic loading, such as frequencies, dynamic displacement, modal forms, vibrations and accelerations. This type of analysis is suitable for structures subject to fast impacts involving frequencies and vibrations.

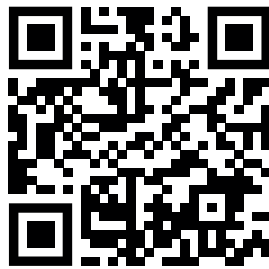
Geotechnical & environmental

Geotechnical monitoring focuses on ground movement, settlement, slope stability, subsidence and any changes that affect the structure stability. Environmental monitoring looks at factors like air quality, water level, soil contamination, wind speed and anything that accelerates structure degradation.



SMART CONSTRUCTION SITE MONITORING

✓ Enhance safety ✓ Increase productivity ✓ Improve quality




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