**sensoworks**

FOR SMART MONITORING:

THE INNOVATIVE (IOT) SOLUTION YOU'VE BEEN LOOKING FOR

The ready-to-use cloud service platform for the remote management and control of complex infrastructure systems.
By collecting, monitoring and interpreting agnostic data from sensors linked to the ground and installed on civil infrastructure, clients benefit from the operational and economic advantages of streamlined integration as well as preventative and predictive maintenance.
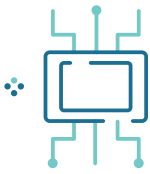
BIM & GIS

- Building Information Modeling (BIM) in 3D
- Georeferenced layer of monitoring sensors
- Sensors status
- Monitoring process

AI Algorithms

- Anomaly detection
- Tiny ML and DL
- Time series prediction and classification

Operational modal analysis

- Natural frequencies
- Dampings
- Deflection shapes

Edge computing

- Edge and Fog (intelligent) computing
- Real-time analysis
- Distributed computing (nano-micro-edge)

Technology and features

- Monitoring and control of critical infrastructure
- Prediction of maintenance interventions
- Two-way interaction with existing equipment
- Collect and view all data from devices and assets
- API-first
- Data-agnostic
- Quick to comply
- Ready-to-use

Functionalities

Sensors monitoring

Automatic actions

Customizable reports

Predictive maintenance

Blockchain certified

ADVANTAGES

Data driven decision

Predictive maintenance

Data certification

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MAINTENANCE AND MONITORING:
the applications of sensoworks

BRIDGE

- Static quantities monitoring
- Dynamic parameters monitoring
- Smart alarms
- Predictive maintenance

Monitoring of the structural integrity of bridges and highway overpass. Structural monitoring usually involves the measurement and control of static deck inclinations, deflection measurements of bridge beams, dynamic modal parameters, and the control of dynamic modal parameters through Operational Modal analysis techniques, both during the construction and operation phases.

TUNNEL

- Alignment
- Deformations
- Anomaly detection

Real time monitoring of convergence, deformations and general health status of galleries.

BUILDING

- Inclinations, flexions, stretches/shortenings
- Acceleration
- Relief of structural damage

Monitoring of the structural integrity of buildings in proximity to the demolition, excavation and construction of new buildings. Structural monitoring involves measuring static deformations (inclinations, deflections, lengthening, shortening) and dynamic stresses (accelerations) on pre-existing structures and on bulkhead poles along the perimeter of the excavation.

SEWER

- Vertical and horizontal pipeline deformations
- Fluid level, flow rate and velocity
- Infiltration of eddy water

Monitoring of sewer tunnels and pipes includes the measurement of vertical and horizontal pipeline deformations and the level, speed, and flow rate of the sewage and monitors anomalies due to parasitic infiltration from outside the pipeline, through the use of distributed sensors.

WATER

- Water losses
- Pumping optimization
- Predictive maintenance
- Smart alarms
- Digitization of asset management

Identification of network sections most likely to break; water piping analysis with priority management of the most critical assets resulting in decreased water losses and increased management efficiency; development of a network model with AI algorithms, powered by realtime data from the field.

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