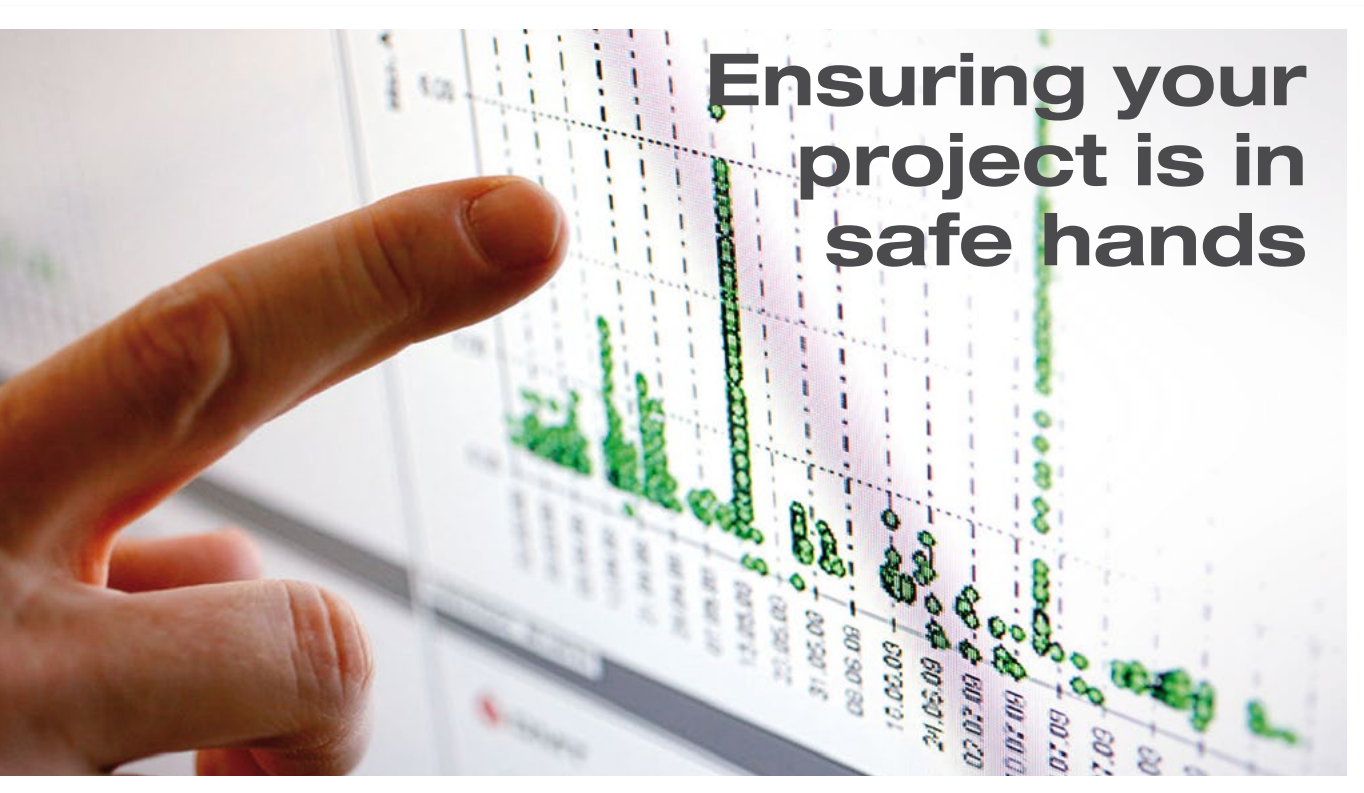


DMT Geotechnical Monitoring

Tunnels, bridges, excavations, underground or opencast mines, complex industrial plants or oil platforms - each project has distinct impacts on the environment and human safety. For the success and acceptance of your project, monitoring critical factors while meeting all specific requirements is crucial.



Our experience and flexibility - your benefit

DMT Geotechnical Monitoring brings to you a variety of assets:

- Qualified professionals from different disciplines
- Accredited and certified experts and specialist groups
- Longstanding practical experience worldwide
- Comprehensive know-how of the latest technologies and trends
- Extensive inventory of state-of-the-art equipment

We can support your project with the most effective, reliable and economical technology available.

We offer flexible solutions to meet your requirements, from simple manual measurements to complex,

integrated and automated monitoring systems with real-time registration and alarm setup.

Reliability, precision and efficiency – key factors to your project's success

With the DMT SAFEGUARD Monitoring System you are independent in your choice of monitoring equipment and number of sensors. DMT SAFEGUARD reliably and securely manages sensor data and equipment. It enables customized and automated analysis of your project's monitoring data and presents the latest status and full result reports via a user-friendly, easy to access web-based interface.

It permits efficient and reliable monitoring of hazardous situations and supports you in solving even the most complex monitoring tasks.

DMT Geotechnical Monitoring

Want to determine the vibrations at your construction site? Need to know the impact of seismicity to the surface above your mining operation? In need of precise information concerning the inclination of your building pit walls? If you are looking for accurate monitoring systems concerning the position of your facilities, endangered slope areas or even offshore platforms, DMT Geotechnical Monitoring offers you suitable, future-proof technology and services – evolved from years of experience in the civil engineering-, mining-, oil and gas sectors.



Monitoring with
high precision
GNSS equipment

We focus on your requirements - with an extensive range of services based on our individually scalable DMT SAFEGUARD Monitoring System, we offer support in all areas: planning, project management, sensor- and measuring cycle control, data transmission, processing, analysis and evaluation, result visualization as well as alerts and alarms. We supply all components as a one-stop-service.

Our services for your success

- Surveilling ground movements and deformations by means of complex geodetic measurement systems using GNSS, total stations, laser scanners, remote sensing methods and more
- Geotechnical monitoring of object changes by determining convergence, crack and gap width, water level, pore pressure, temperature and further parameters
- Vibration measurements employing proprietary, cutting-edge measurement technology for monitoring limit values at industrial plants and civil engineering sites according to national and international standards
- Seismological monitoring with highly sensitive equipment to monitor and analyze induced and natural seismicity, whether above ground, underground or as downhole installations in mining, for the oil- and gas industry or in the field of renewable energy

Multimedia information:

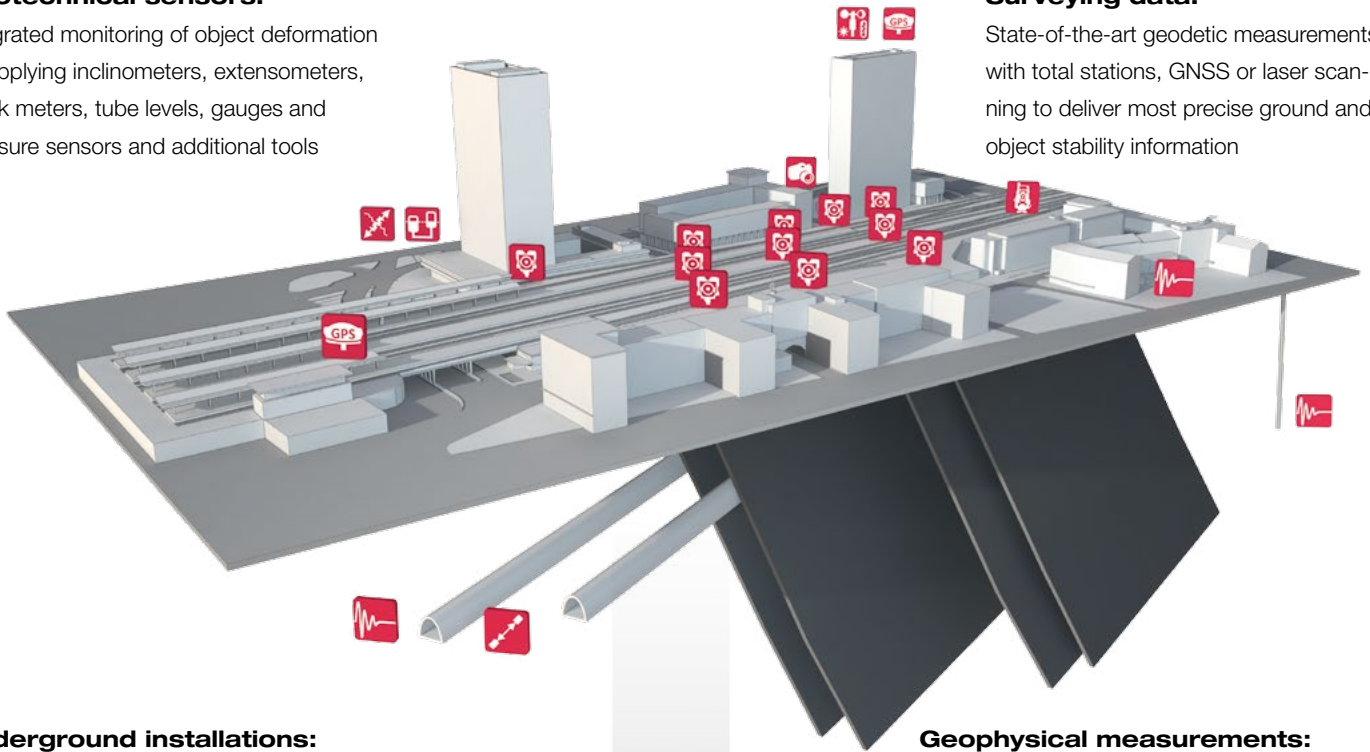
Audio and video surveillance provides a visual and acoustic impression for increased safety at the site being monitored

Geotechnical sensors:

Integrated monitoring of object deformation by applying inclinometers, extensometers, crack meters, tube levels, gauges and pressure sensors and additional tools

Surveying data:

State-of-the-art geodetic measurements with total stations, GNSS or laser scanning to deliver most precise ground and object stability information



Underground installations:

Blast vibration control and geotechnical surveillance for tunneling with ATEX-certified equipment on demand

Geophysical measurements:

Vibration control and seismology with equipment above and below ground and in accordance with valid standards and regulations

Sensor Data

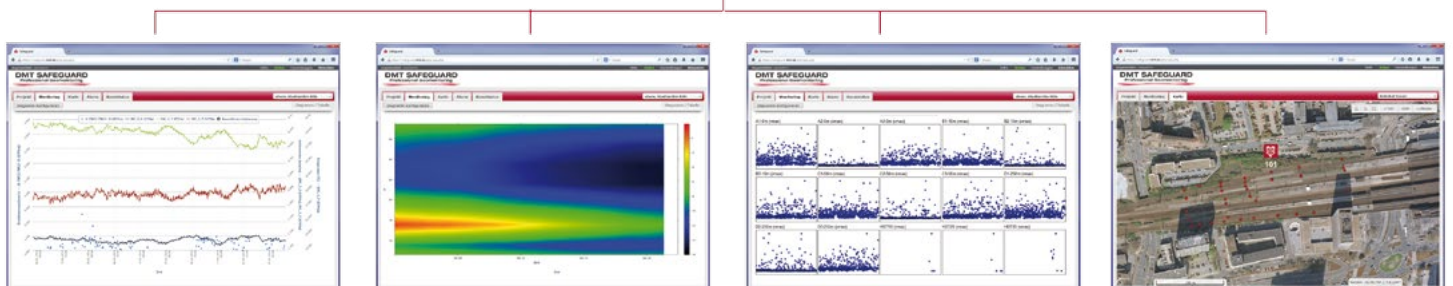
GPS, Pressure Sensor, Geophone, Extensometer, Tiltmeter, Camera, Weather Station, Gauge, Total Station, Crack Meter, Tube Level etc.



Multivendor Data Integration | **DMT SAFEGUARD** | Data-Ports



Data Management & Integration | **DMT SAFEGUARD** | Core-Server



Online Visualization | **DMT SAFEGUARD** | Web-View



Alarm & Support | **DMT SAFEGUARD** | Early-Warning

Our complete range of professional geotechnical monitoring services

- Individual consultancy and planning - including regulatory approvals
- System installation and commissioning of customized multi-sensor monitoring networks with geodetic, geophysical, geotechnical and hydrological sensors and measuring systems
- Application of state of the art measurement technology – on surface, underground, offshore and onshore
- Measurement, documentation and analysis to highest standards in accordance with federal regulations (e.g. DIN 4150, ÖNORM S 8020)
- Execution of all measurement work - campaign-wise or by installation of permanent measurement systems with remote control and alarm function
- Special solutions and measuring instruments for explosion prone areas (ATEX certified measuring systems)
- Secure data storage on centralized data servers with redundant backup - scalable for any project size
- Integration of any data formats, sensor types and equipment manufacturers
- Development and integration of customized, web-based databases and GIS applications
- Data processing, analysis and expert evaluation using comprehensive software tools
- Online visualization and delivery of results with WebGIS support and extensive control functions via a secure internet portal
- Customizable alarm functions and warning messages via SMS, email or signaling devices on site
- Extensive data analyses and assessments by certified expert bodies for ground movements and vibrations



Vibration monitoring with advanced
DMT Measurement Technology

Safety is your advantage

Why choosing DMT Geotechnical Monitoring always pays off

- Improved project safety and facilitated risk management: quick identification of vulnerable areas due to permanent access to all relevant information
- High project reliability: multiple redundant system architecture, intelligent power management and sophisticated communication technology for constant data access - online, mobile and in real time
- Maximum flexibility: seamless integration into existing systems and connection of any sensor regardless of manufacturer as well as of any type and format of data
- Significant time savings: easy to understand, user-friendly analysis and visualization of your data including fully automated analysis and reporting
- Maximum availability of all monitoring information: use of proven, reliable and state of the art measurement systems and sensors including installation, maintenance and support by experienced and trained technicians
- Fast and trouble-free integration into new or running projects, supported by professional, internationally experienced staff
- Optimum efficiency: one-stop-service, high degree of integration and automation, customized system configuration, integrated alarm and quick response in critical situations
- Reduced risks and hazard potentials due to professional support and expert opinions by our certified specialists

Over 100 years of experience and customer confidence

- Vibration measurements since 1907
- GPS measurements since 1987
- Radarinterferometry since 2001
- 3D-Laserscanning since 2005

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