3D-Radar-Array Measurement

Your project

- Are you planning a ground surface rehabilitation?
- Are you realizing construction in brownfield?
- Do you suspect unknown pipe ducts, lines, cavities or contaminants in your project area?

Our offer

- Investigation of subsoil for the detection of metallic anomalies and pollutants
- Improving the design reliability based on robust data output
- Evaluation of existing and potential remediation measures
- Fast results

DMT GROUP

Excellence and innovation in everything we do – this is our claim as an independent, global engineering and consulting company in the construction, mining, plant and mechanical engineering sectors. DMT is the "Engineering & Natural Resources" division of the TÜV NORD GROUP.

Sustainable value creation for our clients is always the goal – knowledge, digitalization and internationalization are our success factors. To this end, we count on our 1,100 employees, 14 subsidiaries, 30 locations and 280 years of experience.

In infrastructure, civil engineering and mining, we are general planners and specialists. We implement system and individual solutions in every discipline and bundle competencies for consulting, engineering, tendering, implementation, monitoring, operation and refurbishment, ensuring planning and investment safety for our customers.

We call this engineering performance.

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GOLD 2023 ecovadis Sustainability Rating

2020 | 2021 INNOVATIVE THROUGH RESEARCH Awarded by the TÜVheinland TU8079665

DIN EN ISO **9001**
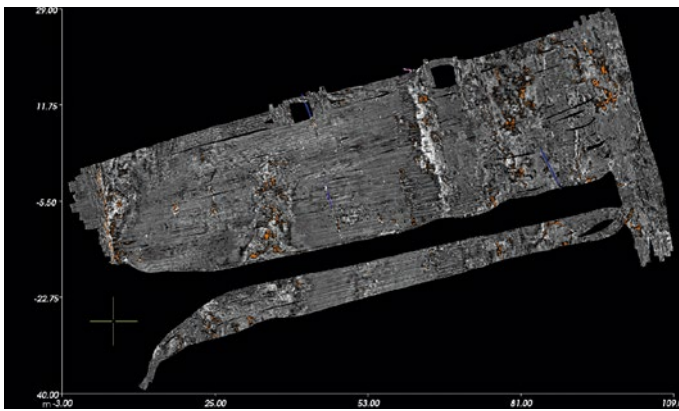DIN EN ISO **14001**
DIN ISO **45001**

Localization of pipes and lines, detection of anomalies, subsoil investigation

High-resolution exploration of the subsurface using innovative geophysical methods

Civil & Mining Engineering
dmt-group.com

**Engineering
Performance**

TÜVNORDGROUP

Detailed background display in horizontal depth sections. Detected anomalies are marked.

Impulse-Neutron-Neutron Method (INN)

- Identification of chemical elements and classification of soil types and soil properties

This provides an unusual field of application!

- Detection of explosive components
- Detection of cavities, backfilled areas and foundations
- Detection of soil layers, minerals with low mineralization and raw material
- Measurement in hydrogeological boreholes for porosity estimation / saturation determination
- Environmental monitoring

Special features of the application:

- Range/penetration depth up to 5 m
- Possibility to classify ground anomalies

> **Impulse-Neutron-Neutron Method (INN)**

> **Georadar (GPR)**

> **Radar-Array-System 3D**

Ground Penetrating Radar (GPR)

- High-resolution non-destructive ground investigation
- Definition of soil strata and detection of subsurface objects using electromagnetic waves (EMR)
- 2D data acquisition and analysis

Reliable underground detection!

- Detection of buried metallic objects
- Location of ducts, pipes, cables, foundations and underground structures
- Cavity detection
- Building inspection
- Location of reinforcement

Radar-Array-System 3D

- Radar measurement with 24 measuring sensors
- Exploration to a depth of several meters, depending on the ground condition
- High level of detail with full-surface data acquisition and evaluation
- Illustration of structures and shapes
- Display as 3D background image

Here we create the 3-dimensionality!

- Full detection of the substrate
- Concentration of the measurement by phased array antenna with strong directivity
- Realization of a high number of single measuring lines with a fixed positioning to each other by one measurement

An aerial bomb detected in radargram and depth section