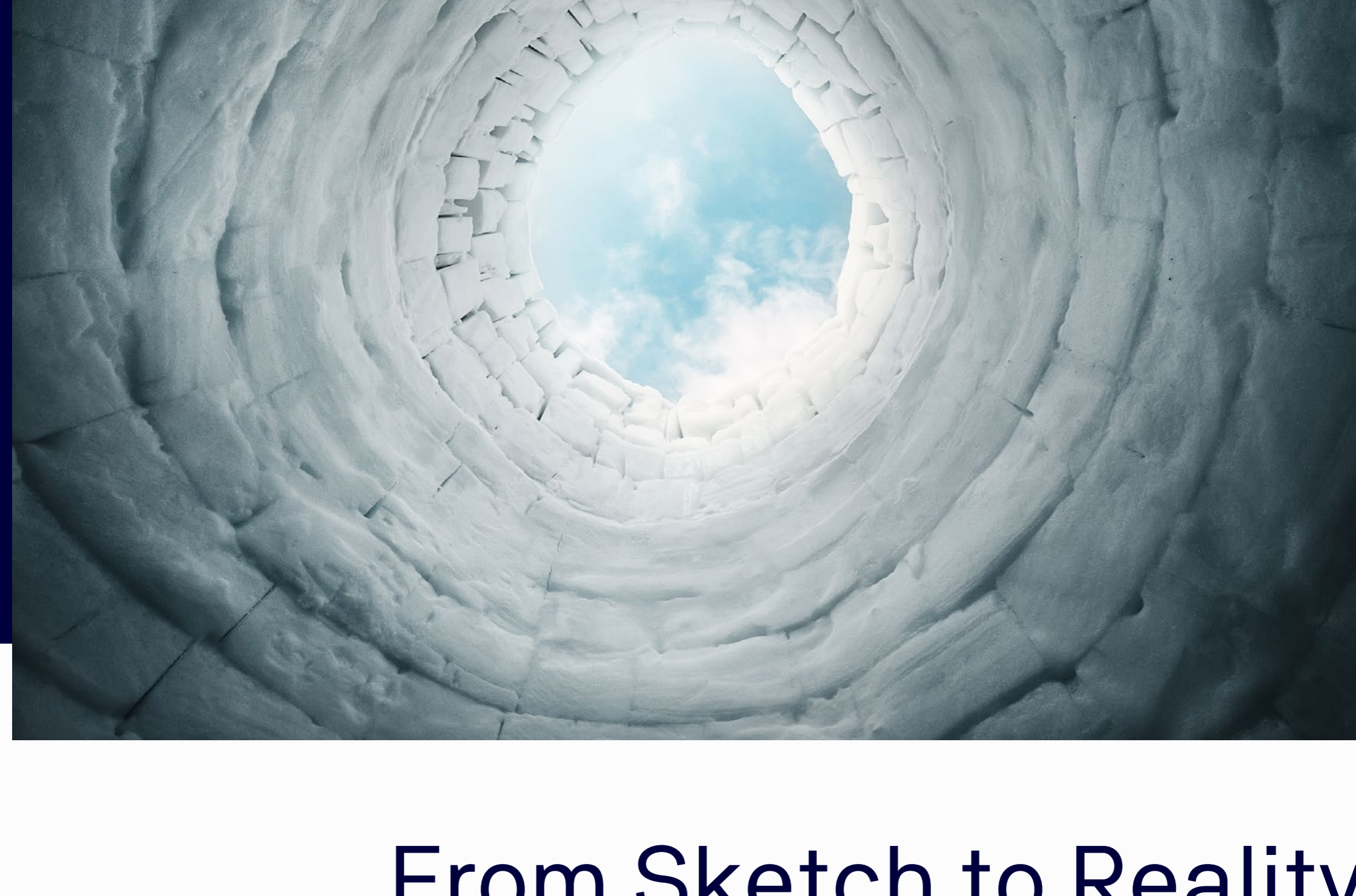


Artificial Ground Freezing

Safe. Proven. Reliable.

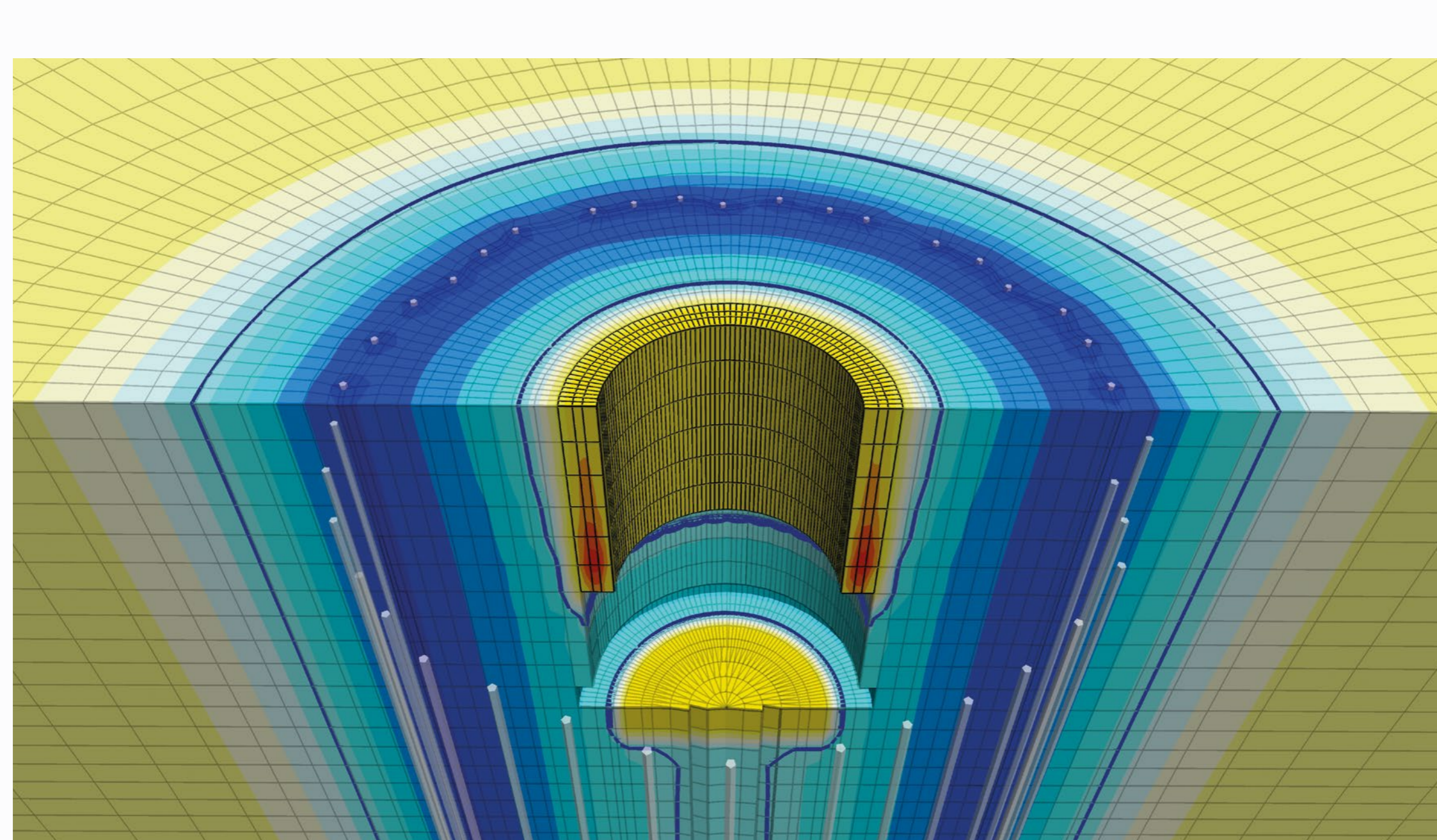


From Sketch to Reality

Ground freezing is a safe, proven and reliable option for mining and civil engineering work in water-bearing soils. The method has been used with great success for over 100 years in mostly very complex ground structures in mining, such as deep mine shafts.

By freezing the water in the ground, a dry and safe working space can be created, even in very confined spaces.

DMT is your partner for the successful implementation of your ground freezing project. We work with you to develop an economical and energetically optimal freezing system. Starting with an idea on paper, through modern 3D numerical models to successful implementation and execution.

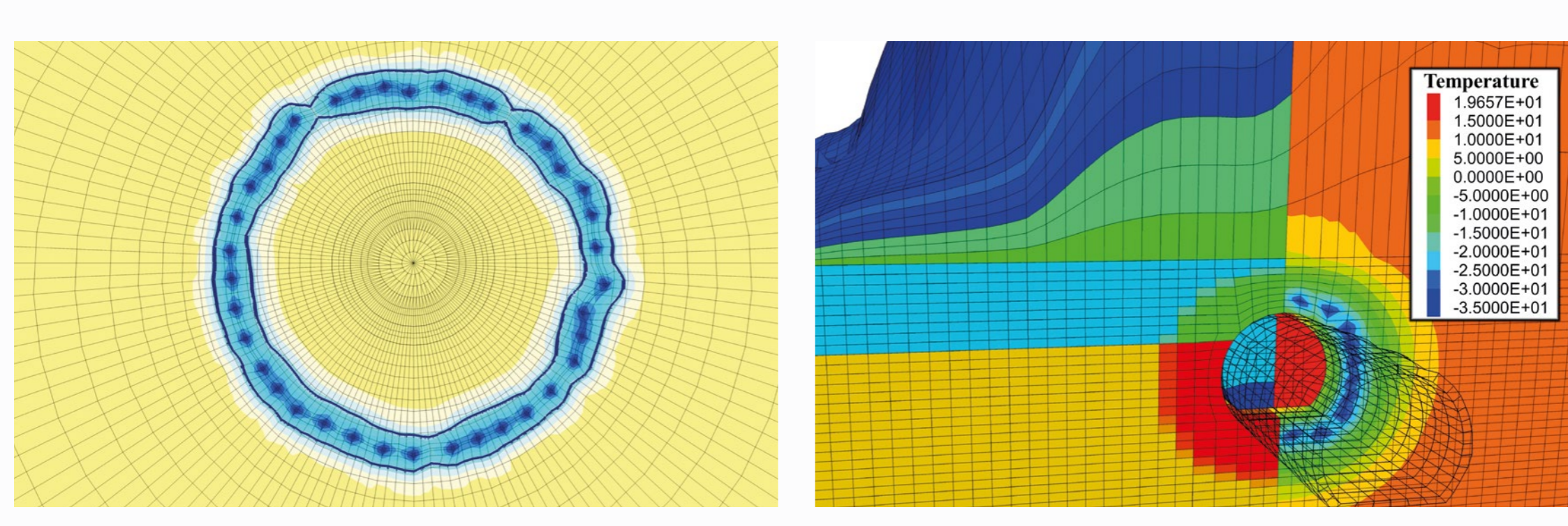


Difficult ground? Groundwater?

- Water-bearing or soft ground are putting in danger your tunneling, civil engineering and underground construction or excavation work? Artificial ground freezing may be the matching solution for your project!
- Groundwater is one of the major challenges for underground excavation – As a temporary construction measure, ground freezing takes care of it by creating a water cut-off and stabilizing the ground.
- You and your workforce are on the safe side with our proven and reliable ground freezing system!

Let DMT freeze it!

- One-stop-shop design, project management, on-site supervision and operation.
- In-house survey and real-time monitoring services.
- Take advantage of our experience and expertise in ground freezing design.



Supporting you throughout your Project



Our Ground Freezing Services

Design of Ground Freezing Systems

- Freeze wall design
- Design of the freeze equipment and piping
- Design of a monitoring program

Ground investigation

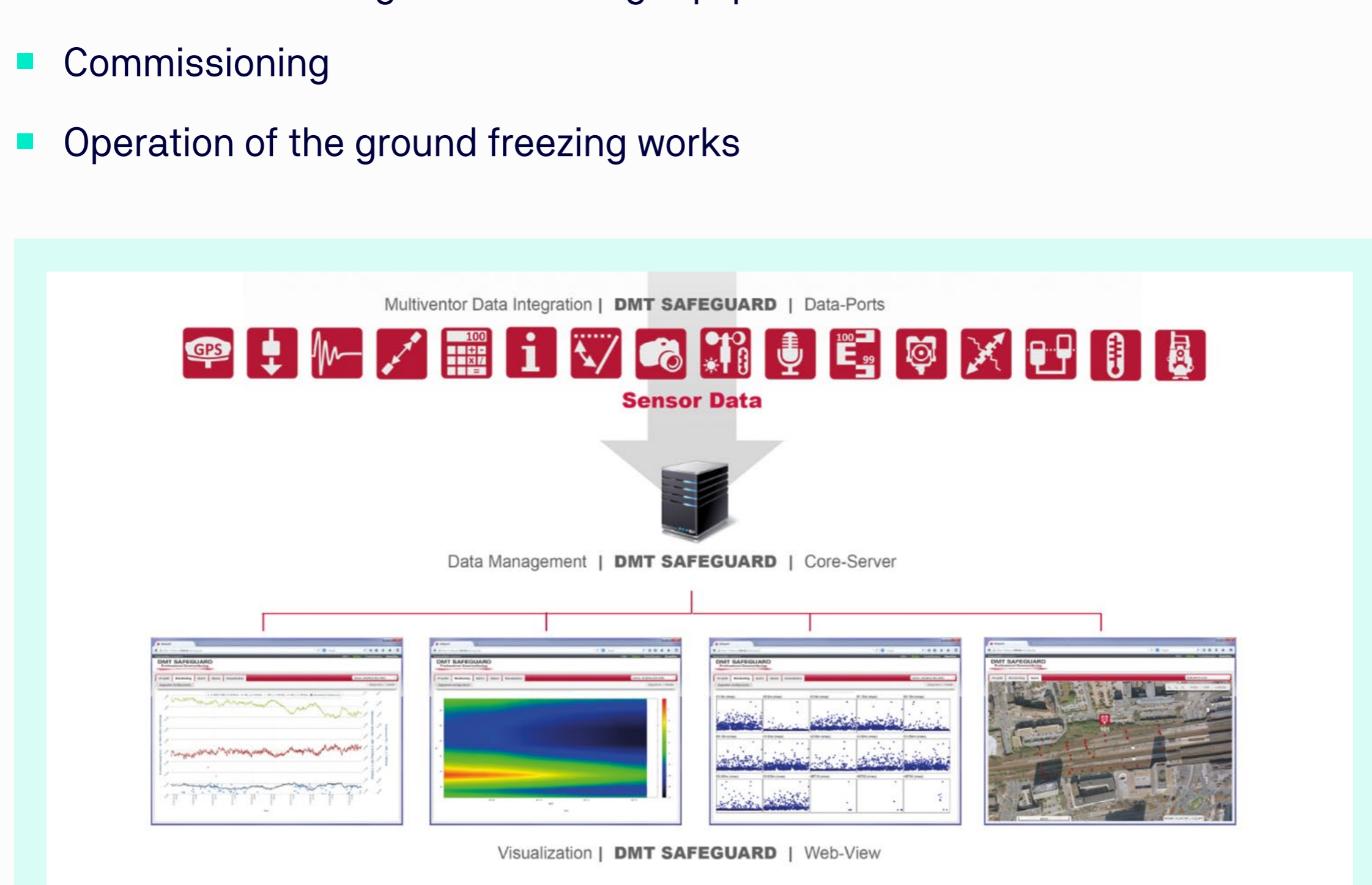
- Design of a tailored investigation program
- Execution of in-situ and laboratory works
- Factual and interpretative reporting

3D-Modelling and Monitoring

- Advanced 3D numerical modelling for ground freezing
- Coupled 3D numerical Thermo-Hydraulic-Mechanical modelling
- Modelling and monitoring of the freeze wall by DMT SAFEGUARD

Operation and Maintenance

- Installation of the ground freezing equipment
- Commissioning
- Operation of the ground freezing works



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.