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GC GROUP
Private – Independent – International

- GC GROUP is an independent and family-owned global business
- offering integrated engineering and consulting services for infrastructure projects.

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GC GROUP

Private – Independent – International

- 50 years of experience
- 350 employees
- 2,500 projects in
- 50 countries







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GC GROUP

Private – Independent – International

- Subsidiaries in:
- Argentina
- Austria
- Chile
- Germany
- India
- Singapore
- Slovak Republic
- Turkey







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GC GROUP

WE PROVIDE COMPETENCE IN ENGINEERING



TECHNICAL INNOVATION | OPTIMIZED SOLUTIONS | STRONG PERFORMANCE

- Investigation Programs
- Feasibility Studies
- General Project Studies
- Preliminary Design
- Tender Design
- Detailed Design
- Environmental impact statements & assessments
- Geotechnical Instrumentation & Monitoring
- Technical assistance
- Expert opinion
- Training programs
- Quality control
- Project management
- Construction supervision

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WE PROVIDE COMPETENCE IN ENGINEERING



- | | |
|--|--|
| <p> Geotechnics</p> <ul style="list-style-type: none"> ➤ Excavations ➤ Foundations ➤ Geotechnical investigation | <p> Construction</p> <ul style="list-style-type: none"> ➤ Construction supervision for infrastructure projects ➤ Contract management ➤ Geological documentation |
| <p> Planning and Advising</p> <ul style="list-style-type: none"> ➤ Health and safety ➤ Hydrogeology ➤ Mining ➤ Natural hazards and risk management | <p> Operations and Maintenance</p> <ul style="list-style-type: none"> ➤ Infrastructure inspections ➤ Tunnel Drainage |
| <p> Engineering and Design</p> <ul style="list-style-type: none"> ➤ Electrical and mechanical engineering ➤ Rail ➤ Road ➤ Underground construction | <p> Renovation and Reconstruction</p> <ul style="list-style-type: none"> ➤ Renovation ➤ Reconstruction |

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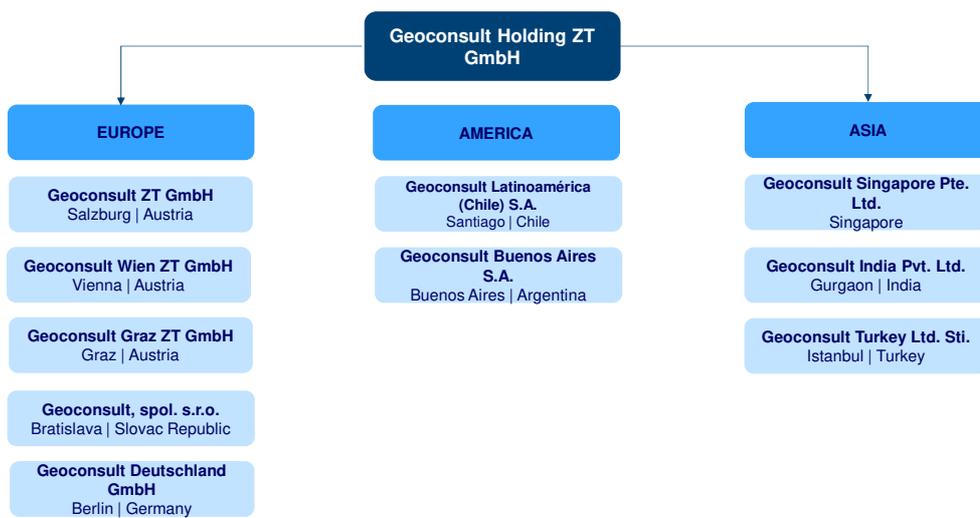


Digital Services

- Building Information
- Geographic Information System
- Modeling and visualization
- Remote sensing with satellites and drones

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GC GROUP
Our services - Geotechnics
Excavations

- Foundation and construction
- soil and groundwater conditions



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GC GROUP
Our services - Geotechnics
Foundations

- Ground surveys
- foundation elements
- geotechnical Monitoring Program



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Our services - Geotechnics

Geotechnical investigation

- Satellite and Drone Technologies
- geophysical methods



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Our services - Planning and Advising

Health and safety

- For us safety and health of everyone involved in the construction and maintenance of infrastructure projects is always a priority.



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Our services - Planning and Advising
Hydrogeology

- Sustainability
- resource-saving use of groundwater




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GC GROUP

Our services - Planning and Advising
Mining

- Mining industry
- expertise
- solutions in process and geotechnics



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Our services - Planning and Advising Natural hazards and risk management

- Detailed natural hazards
- risk analysis
- evaluate potential actions
- cost effectiveness
- planning with targeted implementation



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Our services - Engineering and Design Electrical and mechanical engineering

- Electromechanical and operational safety equipment,
- energy technology (photovoltaics) and plant construction



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Our services - Engineering and Design
Rail

- route planning
- railway engineering





1. Semmering Tunnel
2. Koralm Tunnel
3. Brenner Basis Tunnel



1. Semmering Basistunnel (27 km)
Eröffnung Ende 2026

2. Koralmtunnel (33 km)
Eröffnung Zulauftrecken Ende 2022
Eröffnung Koralmtunnel Ende 2024

3. Brenner Basistunnel (55 km)
Inbetriebnahme 2026

Insgesamt: 115 km

	Heute	NEU
Wien – Graz	2 h 40 min	1 h 50 min
Wien – Klagenfurt	4 h	2 h 40 min
Graz – Klagenfurt	3 h	50 min
Innsbruck – Bozen	2 h	1 h

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GC GROUP

Our services - Engineering and Design
Rail

- Road, route and traffic







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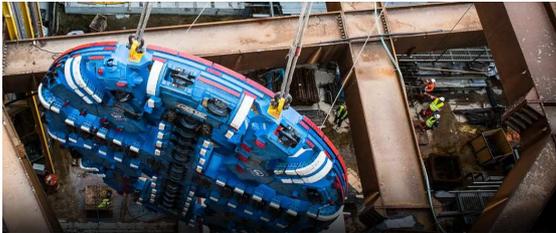
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Our services - Engineering and Design

Underground construction









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Our services - Construction

Construction supervision for infrastructure projects

- Experience in construction supervision,
- site management and
- on-site construction supervision of infrastructure projects of all sizes











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Our services - Construction Contract management

- Contract management is a link between the client and the building supervision
- It is a tool to control costs, time and quality, as well as to monitor the performance of the site supervision
- check the final tender documents for the main construction work in advance or to participate in bidding discussions before the construction work is awarded.



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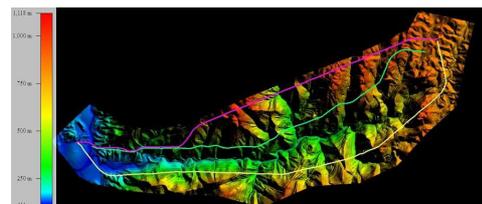
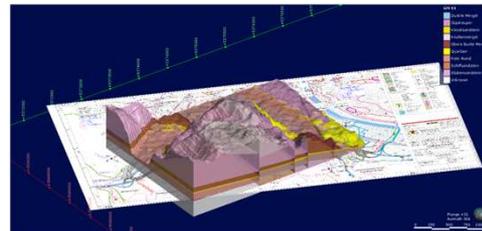
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Our services - Construction Geological documentation

- Geologists determine, analyze and characterize the soil and rock conditions and their effects on construction. The data forms the basis for further analyses and consultations, ranging from planning and supplementary management to maintenance issues



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Our services - Operations and Maintenance Infrastructure inspections

- Checking Buildings



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Our services - Operations and Maintenance Tunnel Drainage

- specific understanding of the process and tailor-made solution strategies for each tunnel
- geology and hydrology, water chemistry and air exchange, lining options, construction
- materials and flow geometries, local microbiology and sintering potentials.



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Our services - Operations and Maintenance Tunneling

- Railway tunnels
- Road tunnels
- Subway systems
- Shelters and underground storages
- Safety installations



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Our services - Renovation and Reconstruction

- Renovations of historic building structures
- Rehabilitierungs-, rehabilitation, renaturation and renovation measures



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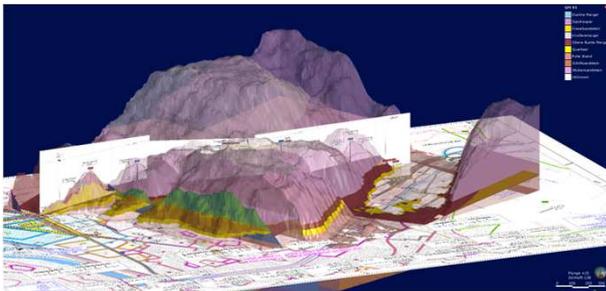
Our services - Digital Services

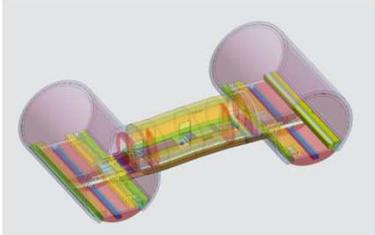
Building Information

- Planning according to BIM methodology
- Scan2BIM
- Participation in AIA / BAP creation
- Creation of data structures and other BIM concepts











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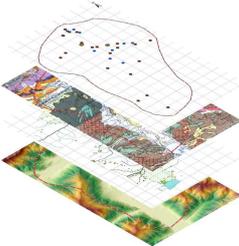
Our services - Digital Services

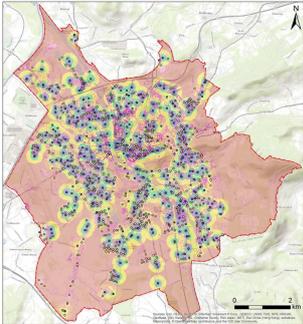
Geographic Information System (GIS)

- Geodata infrastructures
- Location independent access
- Geodata preparation, administration, queries, metadata
- Topographic analysis, Distance functions
- Inclination, exposure, irradiation, visibility
- Spatial analysis, Spatial statistics
- Vertical thematic integration (intersection, evaluation, multi-criteria)
- Raster analysis & map algebra
- Exploratory and descriptive data analysis
- Generation of geospatial data
- Primary acquisition: photogrammetry, GPS, remote sensing
- Secondary acquisition: digitize, scan, vectorize
- Web GIS & web mapping
- Digital on-site recording of geodata











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HSR Graz-Klagenfurt, Koralm Tunnel, Austria

- Twin tube single track railway tunnel
- Length: 32.8 km
- Max. overburden: 1.250 m, NATM/TBM







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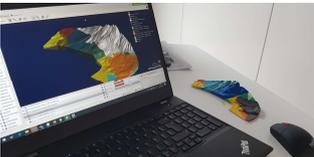
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Our services - Digital Services

Modeling and visualization

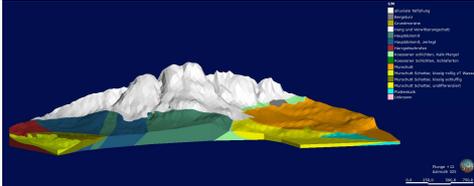
3D print

- Simple access to complex challenges
- Supporting instrument for public relations




VR visualization & workflow

- presentation
- Quick output
- Better understanding
- Cooperation from different locations
- Efficient assignment of experts on-site and remote






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Our services - Digital Services

Fernerkundung mit Satelliten und Drohnen

- Inspections (thermal and optical)
- Photo and video documentation











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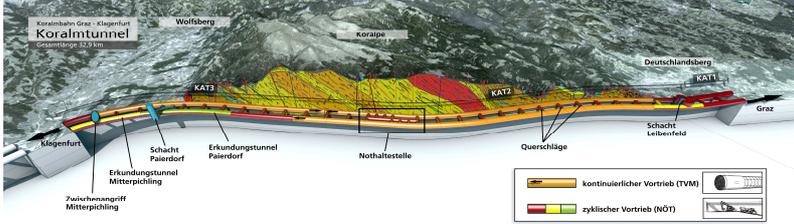
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HSR Graz-Klagenfurt, Koralm Tunnel, Austria











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Railway Axis Munich – Verona, Brenner Northern Access Corridor, Austria

- Kundl/Radfeld – Baumkirchen; section length with GC involvement: approx. 27 km
- Cut & Cover tunnels and troughs: Radfeld (approx. 790 m), Brixlegg East (approx. 1.600 m), Brixlegg West (River Inn crossing – approx. 1.800 m), Münster (approx. 1.200 m)



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Tren a las Nubes, Argentina

- 400 km long existing railway line in the Andes
- Assessment of condition of the railway infrastructure (structural, natural hazards, critical level evaluation, mitigation and rehabilitation measures)
- Capacity analysis
- Transport logistics concept



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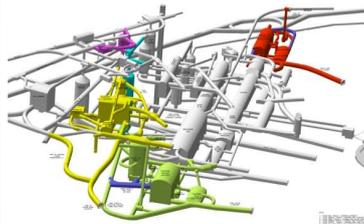
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Andina Mine Stage I Development Plan, Chile



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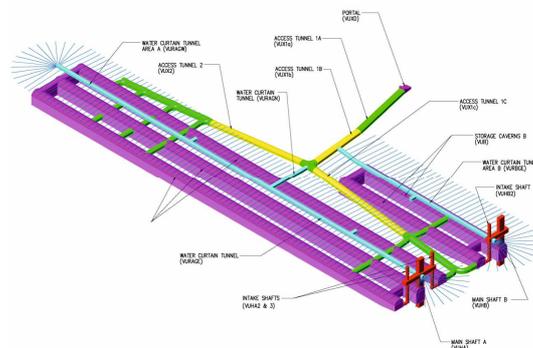
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Strategic Crude Oil Storage Project in Underground Caverns, Visakhapatnam, India



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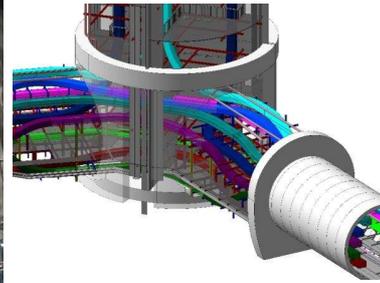
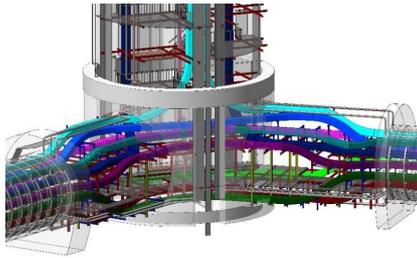
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High Voltage Transmission Cable Tunnels, Contracts EW1 & EW2, NS3, Singapore



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Marine Coastal Expressway, Singapore



- 3 contract sections: 6.4 km, 3 -5 lanes each direction
- Crossing of Singapore River
- Excavation width: 60-80 m, overburden: less than 10 m, depth of marine clay: >40 m



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Tel Aviv LRT, Red Line TBM Tunnels, Israel

- LRT line connecting Bat Yam and Petach Tikva, total length 24 km (11 km underground)
- 8.5 km long twin bore single track running tunnels, 6.5 m internal diameter
- Excavation by TBM
- Preliminary and tender design incl. preparation of tender documents



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Fast Railway Link (FRL) Tel Aviv – Jerusalem, Israel

- Section B / Tunnel 1: 3.5 km long; twin tube, single track tunnels, 9.00 m int. dia., EPB TBM
- Section C / Tunnel 3: 11.6 km long twin tube, single track tunnels; 8.90 m int. dia, 2 double shield TBM
- Design review, supreme supervision, consulting during construction



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Blue Line Underground Section, Jerusalem, Israel

- 20 km long LRT line connecting Ramot to Malha and Gilo; Underground section through Mea Shearim neighbourhood
- Tunnels and 3 underground stations (NATM), approx. 2 km long
- Preliminary, Basic and Detailed Design



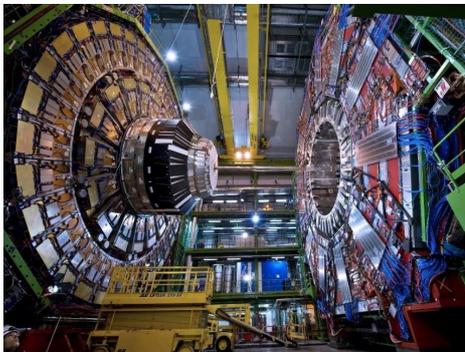
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LHC Point 5 Experimental Cavern CERN – Geneva, Switzerland

- Main Cavern: 21x 35 x 100 m,
- Service Cavern: 13 x 17 x 200 m
- Shafts: diam. 26 m, 90 m deep, swelling rock



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Mahaweli Water Security and Investment Program Phase 1 & Phase 2, Sri Lanka



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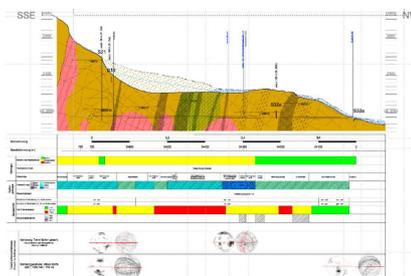
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Storage Power Plant Kühtai, Austria Geological & Hydrogeological Services

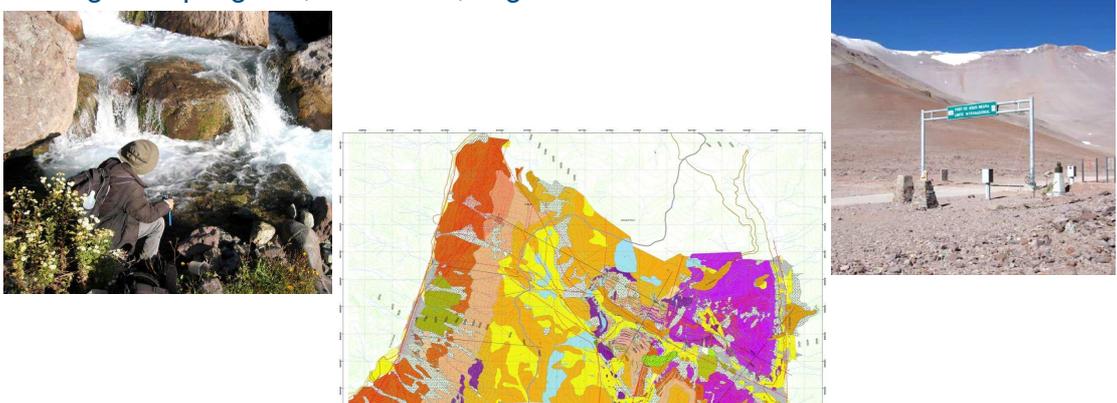


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Túnel Paso Agua Negra
Investigation program, San Juan, Argentina



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