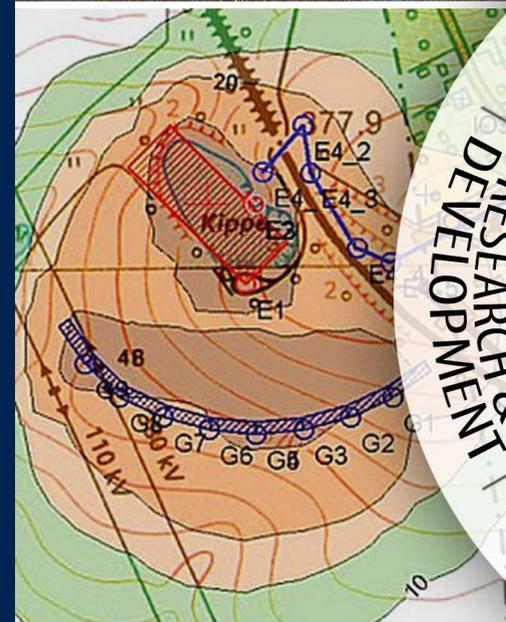


GICON®



CONSULTING

RESEARCH & DEVELOPMENT

SOFTWARE

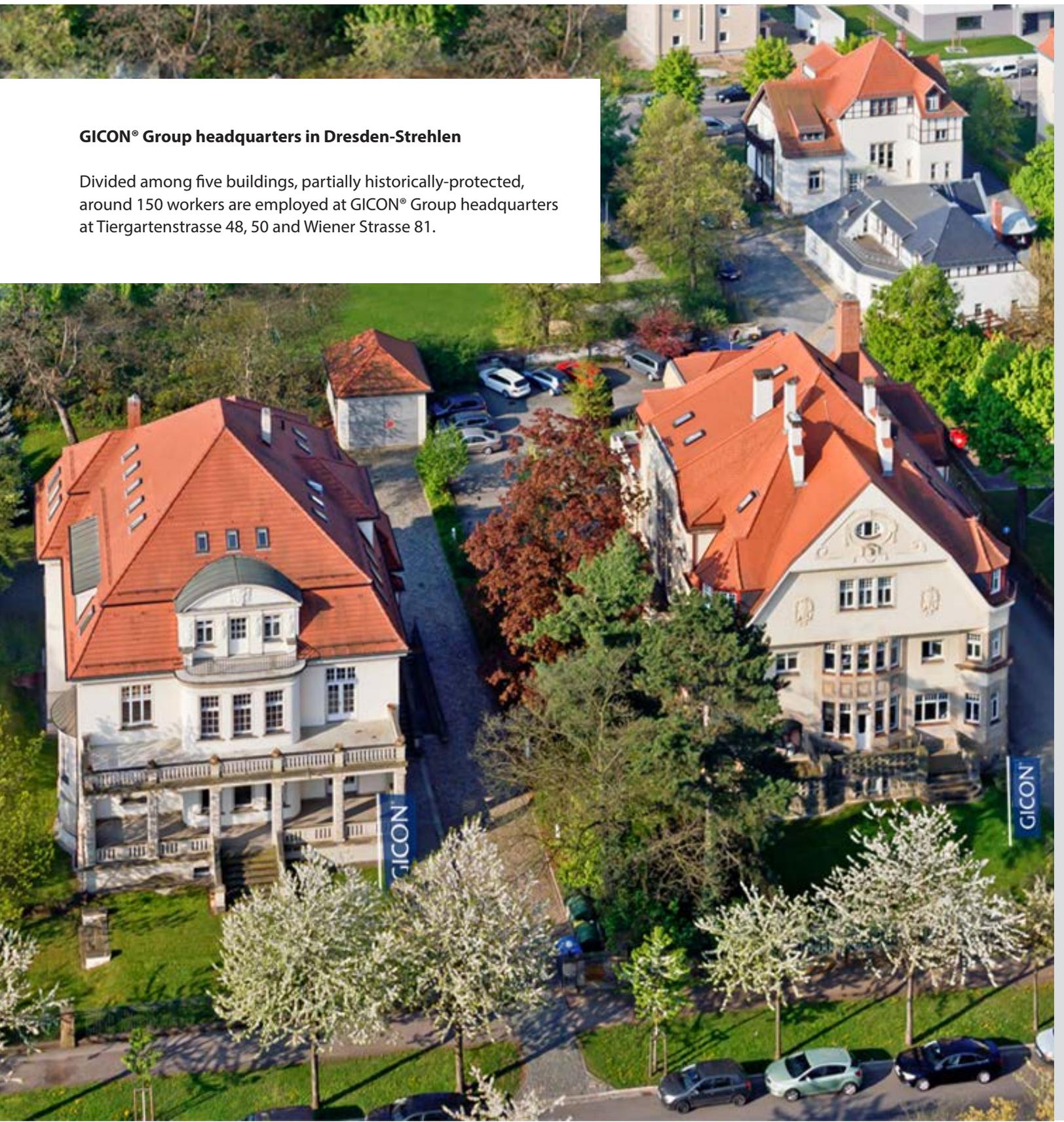
PLANNING

PROJECT MANAGEMENT

CERTIFICATION

FROM
A SINGLE
SOURCE





GICON® Group headquarters in Dresden-Strehlen

Divided among five buildings, partially historically-protected, around 150 workers are employed at GICON® Group headquarters at Tiergartenstrasse 48, 50 and Wiener Strasse 81.

THE GICON® GROUP CONSULTING, ENGINEERING, RESEARCH

Comprehensive and innovative engineering services - high-quality and client-oriented from a single source - this aspiration forms the core of the corporate concept of the GICON® Group. Since the foundation of the first company, GICON®- Grossmann Ingenieur Consult GmbH, in 1994, this concept has been implemented step by step.

We see ourselves as an innovative engineering service provider who, on the basis of an interdisciplinary team, both plans and consults according to the state of the art and also helps to determine the state of the art through research and development.

Since 1994, the GICON® Group has grown into a respected group of SME companies. Starting in Saxony, we have expanded our activities to large parts of Germany and various foreign markets. Today GICON® is a group of internationally-active consulting and engineering companies with several hundred permanent and freelance employees, who provide services in many countries, in different languages and according to national standards. The group operates under the protected brand name GICON®. Sustainability in the handling of resources, in the use of energy and in the extraction of raw materials, as well as a responsible approach to risks in favor of a clean environment and a society worth living in - both today and in the future - our daily work is guided by these principles and this is how we understand our service to clients.

Innovation through research is a trademark of GICON®. Both as a service provider for our clients and for the further development of the companies, we research and develop new processes, products and services. To this end, we have established an extensive network of cooperative relationships with leading research facilities. The chain from research and development to plant construction is completed with competent partners from the respective industries.

The concept of GICON® is based on independently acting employees with corresponding freedom in the organization of their activities. Our successful development to date has only been possible through the innovative spirit, commitment and expertise of each individual. We will continue to build on this in the future.

Compliance with the legal framework and the rules and regulations introduced internally for the quality-oriented implementation of client requirements is a self-image of the company management and the business processes of the group of companies. For this purpose, GICON® has a quality management system with integrated compliance regulations, which is regularly reviewed, improved and certified by external assessors.

The GICON® Group is committed to fulfilling its social responsibility. It initiates and supports a large number of long-term and project-related sponsorship projects. The focus is on in-house sponsoring of individual projects, long-term cooperations in the area of youth development (e.g. Deutschlandstipendium) and commitment to the socially disadvantaged. In this context, charitable associations and institutions such as the Dresden-based Rollimaus Association have been supported for many years.



ENGINEERING SERVICES FROM A SINGLE SOURCE

- GICON®'s services are holistic and interdisciplinary. This closed chain of services is comprised of consulting, planning, project management, expert reports, software, and research & development modules.



- Engineering and consulting are provided by us as single services or as package solutions. This also allows GICON® to complete complex projects requiring diverse technical requirements.
- We continuously and profitably supplement our range of services with research and development and our own software solutions.
- "From a single source" is understood at GICON® as the continuous support of a job order from the vacant lot to the industrial plant, from the idea to the product.
- Our services are based on over 20 years of experience.

RESEARCH AND DEVELOPMENT FOR THE BENEFIT OF OUR CLIENTS

- Since its founding, GICON® has invested a considerable amount of its earnings in the research and development of new processes, products and services. The consistent implementation of this concept has resulted in numerous patents.
- The four biggest innovations to date - the GICON® Biogas Process, the GICON® SOF (floating offshore foundation), the GICON® High-altitude Wind Tower and the GICON® Photobioreactor - are also the results of years of research. In the meantime, these innovations have also been benefitting many of our clients.

STRATEGIC PARTNERSHIPS

- Our partners from science and industry form an integral part of our R&D work. GICON® is linked to more than 20 renowned companies and scientific institutions.
- Research platforms such as the Central Germany Biosolar Center in Koethen and the Large-scale Research and Development Center in Cottbus were established together with universities.

More information on GICON®'s innovative research projects can be found on pages 18 and 19.



Large-scale Research and Development Center in Cottbus

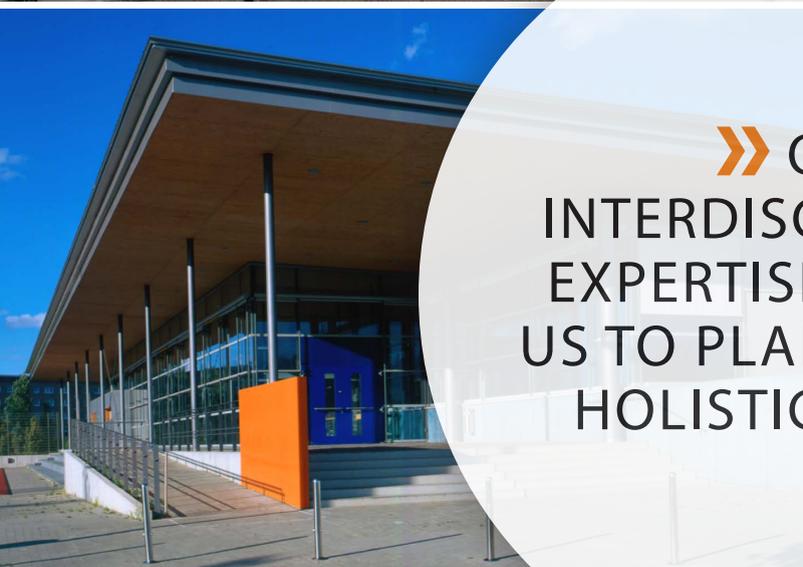


Photobioreactor at the Central Germany Biosolar Center in Koethen



The GICON® HWT uses more constant winds at about 300 meters for higher energy production

FACILITY AND BUILDING DESIGN



» OUR
INTERDISCIPLINARY
EXPERTISE ALLOWS
US TO PLAN SYSTEMS
HOLISTICALLY. «



GICON® PLANS AND OPTIMIZES TECHNICAL FACILITIES & BUILDINGS



Plants as a network of different functional units fulfill important functions in industry and the economy. Modern energy generation, electromobility, the processing of chemical substances or the treatment of water and the disposal of waste would be inconceivable without plants of various dimensions.

The diverse demands on a facility make it necessary to consider many aspects during planning. The correct technical design of the facility components and the selection of suitable technologies are critical foundations for safe and efficient operation. The evaluation of occupational safety and fire protection must also be included.

As an engineering service provider, GICON® supports the entire service life of a facility or system. Our engineers achieve this by managing not only the planning, installation, and commissioning of new systems, but also the optimization, expansion, and safety consultation for existing objects. We will also advise you on all planning issues. Facility and construction planning has been an inherent component of GICON®'s range of services for many years. Correspondingly, vast experience is incorporated into our work.

GICON® does not focus on individual facility or building types, but rather develops solutions for each client's initial situation. We provide planning services for such projects as:

- Electromobility: Monitoring of the entire life cycle of battery production incl. recycling
- Production plants for the chemical industry and plants in the petroleum and energy industry
- Biogas and biogas feed-in plants
- Wind turbines
- Geothermal systems
- Industrial water treatment plants
- Waste disposal plants
- Recycling systems for waste and construction materials
- Building materials and asphalt industry plants
- Buildings for training, research and healthcare facilities

FACILITY PLANNING

- Feasibility studies and preliminary investigations
- Facility concepts / basic and detail engineering
- Process-related design of material and energy flows / detail engineering
- Concepts for occupational safety, fire protection and safety technology

PROJECT MANAGEMENT

- User requirements program (qualities, quantities)
- Costs and scheduling
- Project controlling / project management
- Information management, documentation, and archiving

CONSTRUCTION PLANNING

- Project development / feasibility studies
- City construction planning
- Holistic planning of buildings, facilities and furnishings including construction planning, planning of technical equipment, structural engineering and structural physics / structural acoustics
- Simulations / visualizations

BUILDING ERECTION

- Tender specification and participation in the tender award
- Supervision of construction and installation
- Commissioning

OPTIMIZATION

- Energy efficiency consulting for exploiting technical and economic potentials
- Support of reporting duties

SPATIAL PLANNING AND PERMIT MANAGEMENT



» WE KEEP
ABREAST OF ALL
ISSUES, DESPITE
INCREASINGLY
COMPLEX PERMITTING
PROCESSES «



GICON® PLANS AND DEVELOPS PROJECTS



GICON® coordinates and handles the planning and permit requirements for projects of all sizes – from development concepts to construction management planning all the way to project approval. We advise and support the project developer in this process and work closely with the responsible authorities and supporters of public interests. The experience of more than 500 projects is reflected in our work.

GICON® provides the client with an interdisciplinary team which covers the specialties of city planning, construction and site-development planning, immission protection, ecology, water protection and safety engineering. GICON® independently and competently prepares appraisals such as forecasts for noise, air-pollutants and odors or documents for safety-related requirements such as fire protection, explosion protection or accident systems.

SPATIAL PLANNING

In the area of spatial planning, the numerous spatial requirements are coordinated, any resulting conflicts resolved, and development opportunities derived. We use the instruments of regional, land-use, and development planning to integrate guidelines and goals in practical planning projects. Goals such as resource protection or the extraction of renewable energy can be spatially secured and contractually designed around the requirements of conservation or a livable residential environment.

GICON® produces or supplements the following specialist reports:

- Development and funding concepts for site development, town and city development
- Regional and sub-regional plans
- Land use and development plans
- Projects and urbanization plans

PERMIT MANAGEMENT

During project permitting process, GICON® first assists with the choice of the right approval process. In addition to this, we accompany our clients to preliminary discussions with the responsible authorities and set a reliable schedule. GICON® then creates the required documents including written descriptions, forms and drawings – precisely matched to the project and location. Expert appraisals are generally also coordinated and integrated, which enables an efficient approval process from a single source.

We maintain close contact with the authorities. We coordinate and manage additional requirements, queries, and objections. We organize and support public relations tasks for projects with conflict potential and provide professional support at hearings.

- Plan determination and approval for various projects
- Operation plans for mining projects
- Environmentally-compatible reporting and permit procedures in accordance with BImSchG, TEHG, WHG, KrWG, etc.
- Building permit process in accordance with BauO

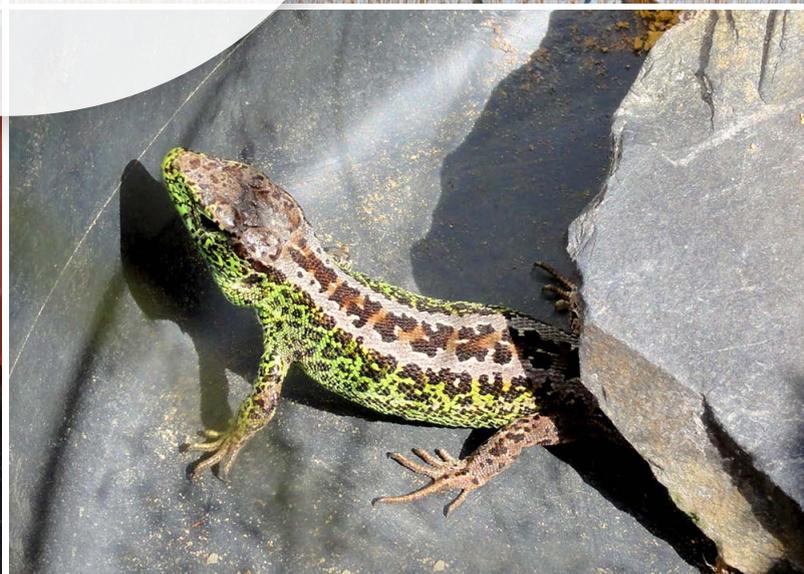
GICON® also comprehensively supports clients with respect to permitting laws after the project has been completed.

- Change or extension of existing permits
- Consultation and reporting in emissions trading
- Environmental data reporting
- Implementation and maintenance of environmental, quality and energy management systems
- Provision of external company appointees for immission protection, waste, water-body protection, accidents or fire protection

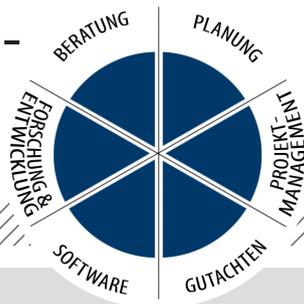
ECOLOGY AND ENVIRONMENT



» ENVIRONMENTAL PROTECTION IS MORE THAN JUST A JOB FOR US. «



GICON® DESIGNS ENVIRONMENTALLY-FRIENDLY PROJECTS



Human impact is constantly altering the character of our environment. In order to alleviate the effects of humans on animals and plants in their habitat, the legislative approval process requires extensive analyses of current conditions as well as prognoses and assessments of the consequences of encroachments on nature – for example, for construction projects and the exploitation of natural resources.

GICON® is among Germany's leading companies for the research and evaluation of terrestrial and aquatic ecosystems. Our experienced team of specialists relies on interdisciplinary internal resources for the analysis and assessment of complex environmental influences and works closely with partners from the scientific community whenever necessary. The advantage for the client lies in the synergistic optimization of their project under consideration of all environmental requirements.

ON- AND OFFSHORE

GICON® possesses specialized expertise in the areas of environmental planning and conservation support for projects and plans in the onshore and offshore industries. This includes the following services, which encompass all phases of a project:

- Site appraisals with focus on the environment, feasibility studies
- Environmental and FFH compatibility studies and environmental reports
- Immission protection appraisals (air pollutants, odors, noise)
- Landscape conservation support and implementation plans
- Landscape and green-space plans
- Biotope and species protection studies and technical contributions
- Ecological environmental construction support
- Environmental monitoring

FLORA AND FAUNA

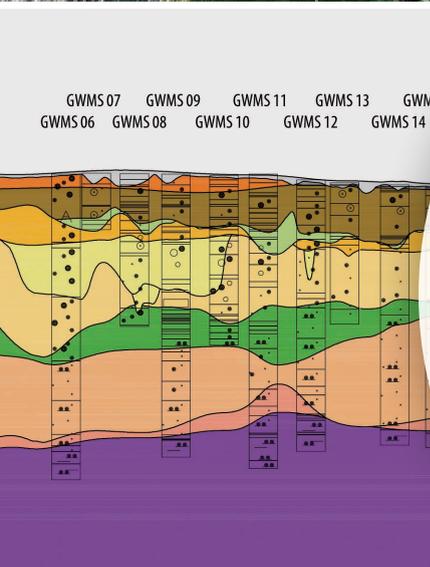
Floristic and faunistic mapping, expert appraisals and statements on nature conservation are part of our scope of services. We specialize in the following species groups:

- Staging, migratory and breeding birds
- Bats
- Amphibians and reptiles
- Fish
- Benthic organisms and habitats
- Marine and land mammals
- Insects (dragonflies, grasshoppers, butterflies, beetles)
- Flora, vegetation and biotopes

SPECIALIZED EQUIPMENT

- Work boat and various watercraft
- Radar devices for recording flight height, direction and quantification of bird migration rates
- High-resolution camera systems for recording staging and flying birds both day and night
- Digital air-imaging system for recording staging and migrating birds as well as marine mammals
- Ultrasonic detectors for bat call recording
- Underwater robots (ROV) and underwater video systems
- van Veen grabs, dredges and additional devices for benthos sampling
- Diverse fishing devices including electrical fishing equipment
- Underwater detectors for recording porpoise activity (C-PODs)
- Measuring device for various physical-chemical water parameters

REMEDIATION, REVITALIZATION AND DEVELOPMENT



» IN TIMES OF
RESOURCE SHORTAGES,
WE SAFEGUARD
PROPERTY VALUES AND
WATER BODIES «



GICON® INCREASES THE VALUE OF REAL ESTATE AND WATER BODIES



Anthropogenic interventions in the milieu of soil and water often have negative impacts on their condition. Industrial sites, mining, and cultivation of soils and water bodies have long-term impacts on both the immediate environment and character of entire regions.

The greatest economic and ecological risks are thus posed by contamination due to accidents or improper handling of hazardous substances and wastewater, which cause natural and anthropogenic disturbances to the subsurface along with flooding. The consequences are chemical and physical changes in soils and waters, which in turn can have diverse negative impacts on objects of protection.

The repair of existing damage and the reduction of risks are two major task areas for responsible public institutions and private companies.

GICON® supports its clients in all project phases. We apply the latest technologies and our extensive experience to remediate existing and acute impacts, to restore a tolerable condition, and to increase the value of sites. This is the result of comprehensive remediation measures, in particular in the states of the former German Democratic Republic, where following Germany's reunification, GICON® participated as one of the leading engineering firms. Remediation and revitalization made the regional structural transformation a success – for example, the Bitterfeld-Wolfen region.

Our goal is the proportional remediation, revitalization and development of sites. For these purposes, GICON® creates concepts for the management of groundwater and surface water and for maintaining and increasing property value.

EXPLORATION

- Determination of the current status
- Use of the latest measuring and investigational technologies
- Site investigation, foundation consulting
- Cooperation with specialized laboratories
- Environmental and geotechnical risk assessment

CONCEPTS AND APPRAISALS

- Appraisals and expert services
- Due diligence and valuation in terms of the environment
- Profitability assessments
- Remediation of former mining sites
- Secondary use concepts

MODELLING

- Structural, flow, and transport modelling
- Groundwater management
- Interaction of surface waters and groundwater
- Management of flood risks

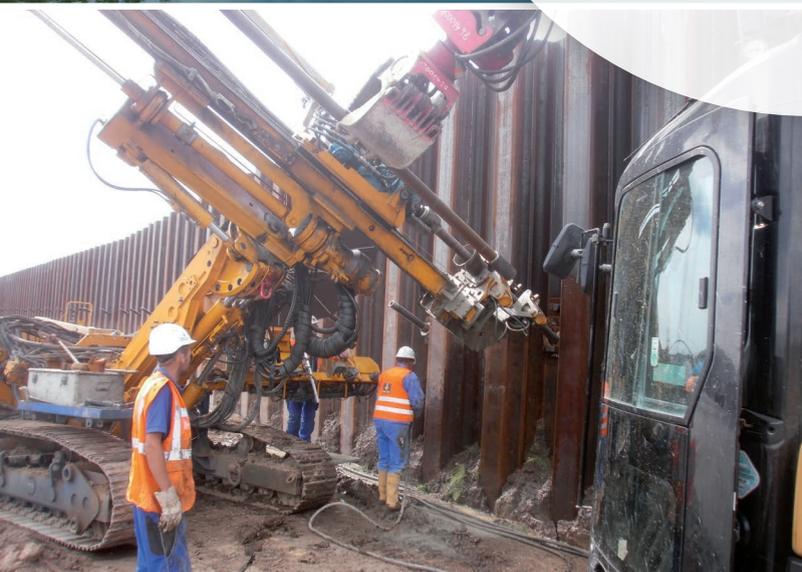
REMEDIATION MANAGEMENT

- Project management and controlling
- Permits
- Construction supervision and specialist construction management
- Waste management
- Complete services at a fixed price

MONITORING

- Monitoring and optimization of actions in the areas of groundwater, surface water, soils and geotechnology

MINING AND GEOTECHNICAL ENGINEERING



GICON® PROTECTS THE NATURAL RESOURCES



The mining and geotechnical engineering as well as mining succession sectors are committed to protecting natural resources in order to preserve them for future generations. To do this, we must make our economy more sustainable. Economical planning and construction requires sound knowledge of the subsoil and groundwater conditions. Only by taking a holistic view of all requirements for the structure and the subsoil can investment projects be optimally calculated in terms of costs and deadlines right from the start.

FOCUS OF OUR COMPANIES

- geotechnical engineering & mining succession
- geotechnics
- mining
- raw materials

The Department of **Geotechnics in Mining & Mining Succession** has experienced geotechnical specialists who handle complex tasks in the following areas:

- active mining
- former mines and mining remediation
- mining succession / reuse and spoils pile development

For our clients, we develop holistic solutions, starting with an exploration concept up to the subsoil investigation and subsequent stability assessment including variant investigation for necessary stabilization or subsoil improvement measures. In addition to preliminary investigations, GICON® provides execution planning, the preparation of the tender documents and the technical supervision of construction as well as the aftercare.

Extensive specialized knowledge of GICON® employees is available for the final design and securing of opencast mining pits and spoils pile embankment systems.

GICON® is also increasingly working on projects in connection with spoils piles (e.g. by wind turbines). Here, specialized site foundations (e.g. combined pile-plate foundations) are developed in accordance with the respective ground conditions.

In the **field of mining**, we support you in the implementation of complex mining projects. GICON® provides the following services, whereby we also coordinate technical services of cooperation partners in the interest of the client and integrate them into the mining planning.

MINING SERVICES

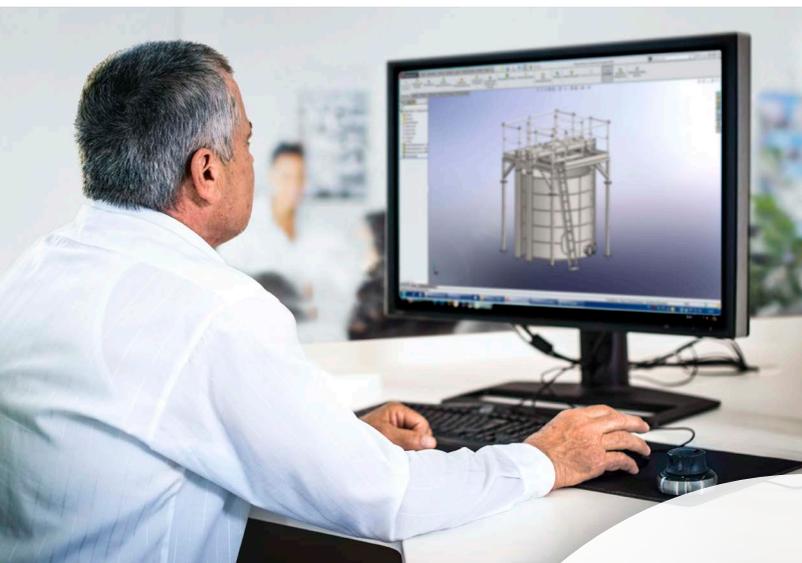
- Desktop studies
- Reconnaissance and exploration
- Feasibility studies
- Approval planning
- Operating phases
- Plant closure

The **Department of Geotechnics** is characterized by an interdisciplinary team. The cooperation of experienced geotechnical engineers, civil engineers, geologists and geographers enables us to create project-specific concepts and solutions for our clients. Consulting engineers and appointed experts guarantee highest quality and professional competence.

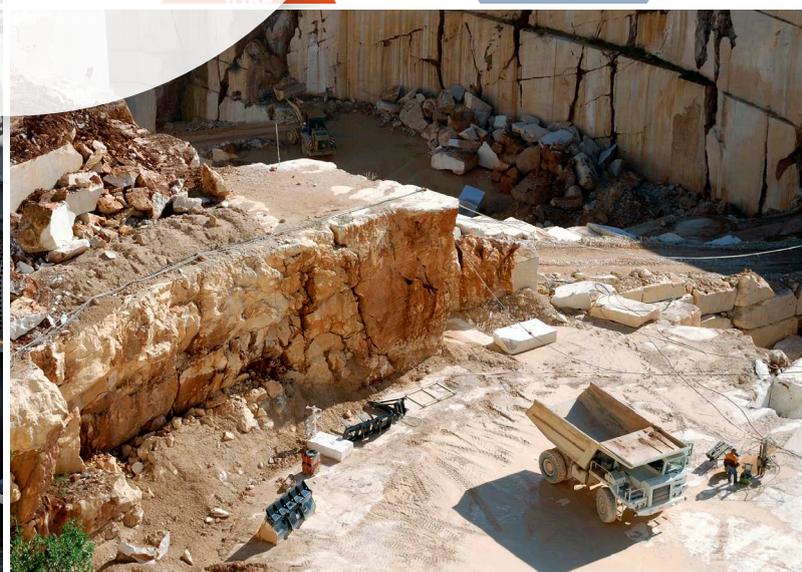
GEOTECHNICS SERVICES

- Exploration, expert opinions and consulting
- Geotechnical calculations and specialized planning
- Geotechnical site management and Quality assurance

COMPUTER ENGINEERING



» THE DEVELOPMENT OF SOFTWARE FROM AN ENGINEERING PERSPECTIVE IS OUR SPECIALTY. «



GICON® DESIGNS AND DEVELOPS IT SOLUTIONS



Information technology has sustainably shaped our world over the past two decades. Today, the processing of extensive volumes of data accompanies almost all economic and administrative processes. Highly specialized software systems are increasingly taking over important tasks in companies and institutions. In the digital age, these entities are inevitably dependent on IT solutions to achieve their goals.

GICON® offers perfectly tailored software systems which are developed and used either industry-wide or by specific clients. Our services in this area include the entire software life cycle – from the initial concept and development through to commissioning, training and continuous maintenance.

Computer engineering enhances the majority of GICON® Group products and services and thus completes our extensive service chain. Our employees create specialized software, process CAD models and maps in geographic information systems (GIS), and operate internal information and communication technology throughout all divisions within the Group. Together with our engineering knowledge, the experience gained is continuously incorporated into concept and software development.

TECHNICAL INFORMATION SYSTEMS

Designed and developed together with our clients

GICON® designs and develops technical information systems for the storage and processing of larger data quantities. We support our clients in keeping data available, searchable, combinable, and distributable. The GICON® approach is characterized by the close collaboration of computer scientists and engineers with future system users. We use both concept-based procedural models and flexible development methods.

The origin of these developments can be either the client or pre-existing concepts or specifications.

Specialized information systems are used in many different fields. We have extensive project experience in the following areas:

- Nature conservation, biodiversity
- Contaminated sites, soils, resources, mining
- Agriculture, forestry
- Climate impacts and adaptation
- Air and noise pollution
- Environmental radioactivity
- Disaster management
- Water management, water-body ecology
- Administration

SOFTWARE PRODUCTS

In use by many licensees

GICON® develops software products with high practical relevance, which are already in use by more than 50 licensees with more than 1,000 users. Thanks to the long-term exchange between users and developers, we are constantly expanding and optimizing our products.

GICON®'s universal and flexible system management software – CoCheck Compliance Check has been in use by energy providers and chemical and engineering firms in industries such as mining and quarrying since 1994.

www.cocheck.de

GICON®'s specialized software – Soil Compaction Management System (SCMS) – is used for the quick assessment of complex data records, which accrue during such processes as vibrocompaction displacement in the construction of wind parks on artificial slopes.

www.scms-web.de

RESEARCH AND DEVELOPMENT



» RESEARCH
AND DEVELOPMENT
HAS BEEN AN
INTEGRAL PART OF OUR
COMPANY PHILOSOPHY
FOR MORE THAN
20 YEARS «



FOUR OUTSTANDING GICON® INNOVATIONS

GICON® SOF

The engineering response to concerns about the future of the offshore wind industry

With its SOF (swimming offshore foundation), GICON® has developed a floating platform for offshore wind turbines which can be used at water depths between 18 and 350 meters and thus in areas with high and uniform wind speeds. This foundation is completely produced on land, including the towing of turbines to the site where the entire structure is installed without additional installation ships. This enables an inexpensive installation with levelized cost of energy well below 10 Euro cent/kWh. The installation is also associated with low environmental impacts, since noise-intensive work, for example, can be avoided or greatly reduced.

www.GICON-sof.de

GICON® PHOTOBIOREACTOR

Cultivation of microalgae for energy and material utilization

With its patented GICON® Photobioreactor, GICON® has developed a fully-controllable and adjustable technology as a closed system for the efficient cultivation of microalgae. The geometry of the GICON® Photobio-reactor – also referred to as a “Christmas-tree reactor” because of its cone shape – ensures optimal light utilization. Carbon dioxide and nutrients can be predictively metered depending on the growth rate. The innovative and geometrically-variable design as a flexible double-tube system protects the algae from extreme temperature fluctuations. This temperature control makes stable algae cultivation possible, even in desert regions.

www.GICON.de/biosolar

GICON® BIOGAS PROCESS

A robust process for processing mixed organic feedstocks which are structure and impurity-rich.

Together with the Brandenburg Technical University in Cottbus, GICON® has researched and developed a specialized biogas process. The GICON® Biogas Process is very well suited for waste-derived feedstocks which exhibit a high degree of structure but also contain high levels of impurities. This process enables utilization of both source-separated organics, household waste, lawn/garden wastes and also agricultural feedstocks such as energy crops or solid manure. The process is constantly being optimized in GICON®'s research and development center in Cottbus.

www.GICON-engineering.com

GICON® HIGH ALTITUDE WIND TOWER

Constant power generation at 300 m altitude

At a height of over 200 meters, wind blows more constantly and energy production is more efficient. The GICON® High-altitude Wind Tower (GICON® HWT) exploits these properties with a hub height of 220 to 300 meters and a rotor diameter of 120 to 140 meters. With the rated power of four to six MW, an energy production of more than 38 million kWh is possible. This is a 25 to 35 percent higher energy yield compared to conventional wind turbines. The GICON® HWT can also contribute to more effective land use through its use in existing wind farms. The high-altitude wind tower can largely be produced by regional companies. This means that more than 70 percent of the added value remains locally.

www.GICON.de/hwt

GICON®



GICON® Group

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www.GICON.com