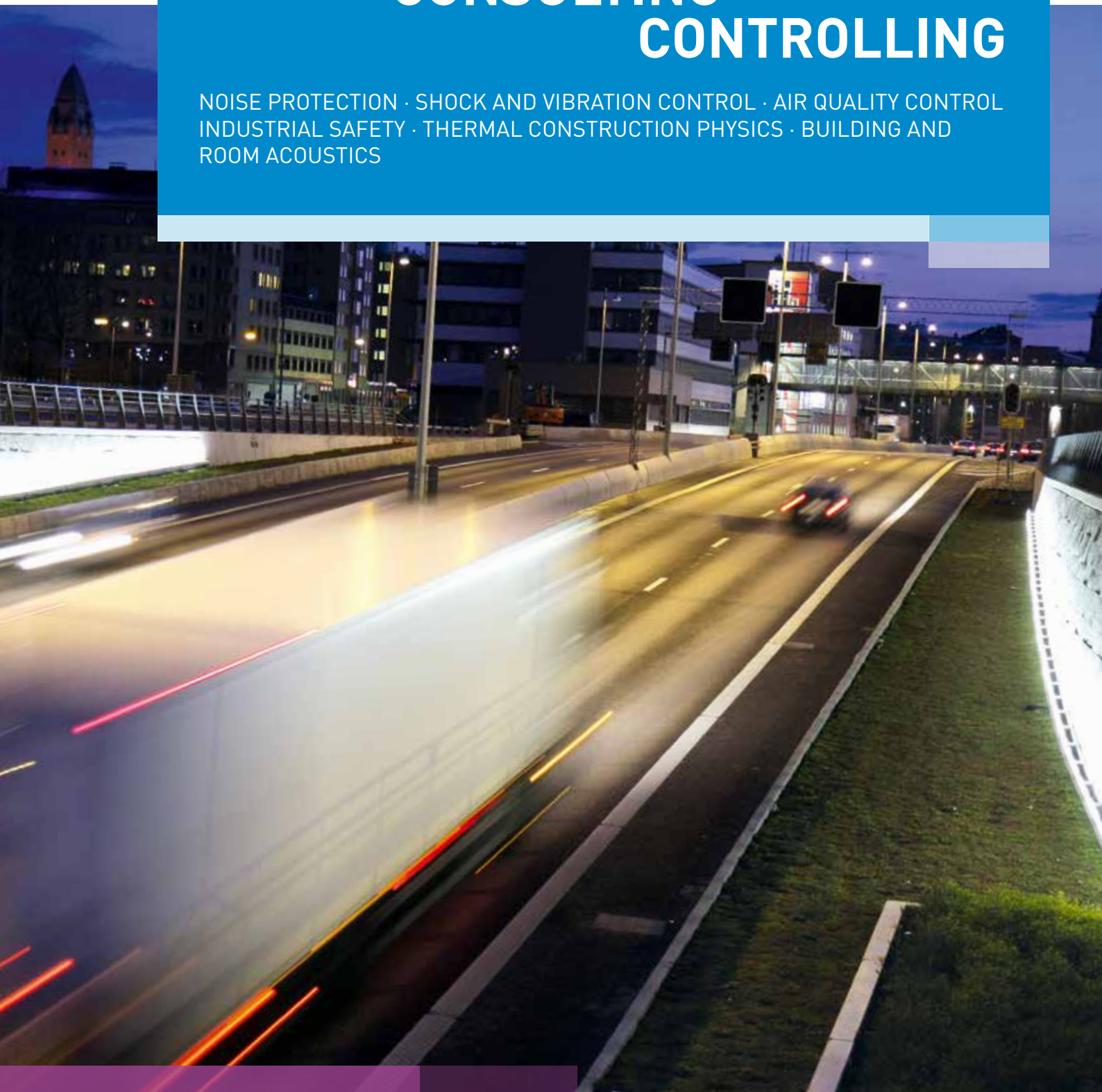


BUILDING FOR THE FUTURE

PLANNING CONSULTING CONTROLLING

NOISE PROTECTION · SHOCK AND VIBRATION CONTROL · AIR QUALITY CONTROL
INDUSTRIAL SAFETY · THERMAL CONSTRUCTION PHYSICS · BUILDING AND
ROOM ACOUSTICS





YOUR PARTNER IN ENVIRONMENTAL PROTECTION

Since 1975, ACCON has represented both private and public clients in all fields of noise protection, industrial safety and environmental planning, concerning both construction and investment projects. ACCON and its partner organizations, now offer their services all over Europe and China, specializing in the fields of sound and vibration technology, air quality control and energetic improvements. ACCON's area of expertise includes measurement, assessment, modeling and calculation, as well as drawing up expert reports and conceptual design.

As a leading independent German noise and vibration consultancy, we conduct our work conscientiously and in a technically rigorous way.

Employees at ACCON and at their sister companies have managed and contributed to a number of national and international standards and guidelines, therefore contributing to the advancement of their technical disciplines.

GROUP STRUCTURE

ACCON group consists of ACCON GmbH and its sister companies, which are independent businesses in their own right.



ACCON Group's organizational structure supports its network of business in all areas of responsibility and enables a smooth interdisciplinary cooperation and the free transfer of knowledge within the group.

For large and international projects, multi-disciplinary project teams can be created from our network of businesses, tailored to the needs of your project, in terms of skills and timescale.



TOTAL DESIGN SOLUTIONS

For noise assessments and related design services, it is possible to construct a three-dimensional computerized noise model which contains all relevant noise sources, as well as the sensitive receptor locations. The computer model allows the determination of the most dominant noise sources at specific receptor locations and the rating of individual noise sources depending on their specific noise contribution. This can then be used for the development of cost effective mitigation strategies for noise reduction if necessary. The construction of the noise model can be supported by actual noise emission measurements if required.

Compliance noise measurements can be carried out both throughout the construction phase and in any operational phases to verify the result of the computer modeling. If necessary, long term mobile noise measurement stations can be utilized.

EMPLOYEES AND TECHNICAL EQUIPMENT

Our quality and efficiency are a result of our extensive project work experience and the specialized knowledge of our employees.



ACCON employs approximately 20 scientists and engineers. A further 20 employees work within the fields of sound protection and environmental planning in ACCON's sister companies and international offices.

Our staff is carefully selected, with regard to professional qualifications, specialized knowledge and professional specialization.

Further training, both internal and external, ensures the continual improvement of all of our employees to the benefit of our clients professional development.

Our offices maintain a wide range of equipment, including sound power meters and noise monitoring systems capable of automatic acoustical and meteorological data logging. We always use the most technically appropriate, yet cost effective equipment and all equipment is calibrated in line with national standards.

In addition, we have a number of multi-channel devices for measuring shock and vibration at our disposal in our own laboratory.

In our own reverberation room, the acoustical rating of products can be determined according to DIN EN ISO 354 or DIN ISO 3741.

In a joint working group ACCON and DataKustik support the development of the worldwide used noise prediction software program - CadnaA (www.datakustik.com).

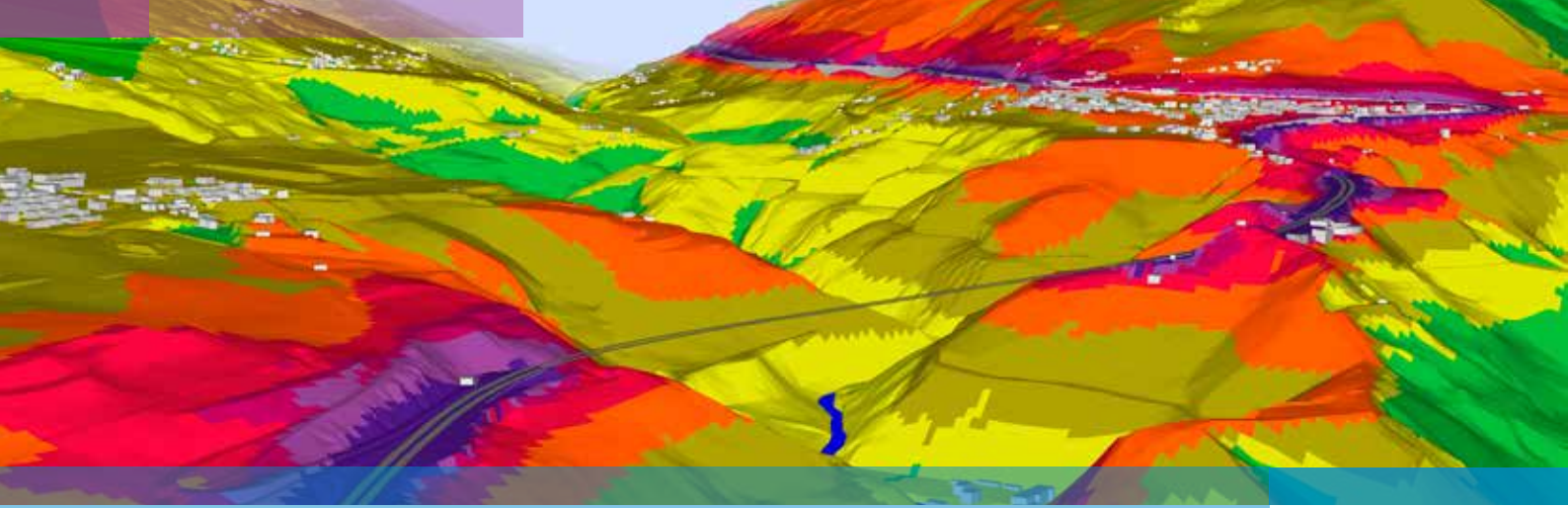
QUALITY ASSURANCE



All employees support our aim to guarantee the highest possible quality in our work. Together we have developed a quality management system according to DIN EN ISO 9001, which is continually improved.

Our high standard of quality is confirmed in our yearly audits, carried out by external auditors. Furthermore, ACCON utilizes a management system to document and archive all activities (DocuWare®).

ACCON is an officially recognized institute for the measurement of noise and vibration according to § 26 BImSchG and is authorized to conduct noise measurement for the German authorities and courts, as well as a test institute for sound insulation testing for structural engineering.



MEASURING – CALCULATION – PROGNOSIS

In the context of **development planning**, ACCON can provide all necessary environmental services. When planning commercial districts or industrial zones adjacent to residential areas, constraints upon the use of commercial land in terms of noise emissions can be determined. The requirements of national noise standards can be fulfilled without constraining the development potential of the site.

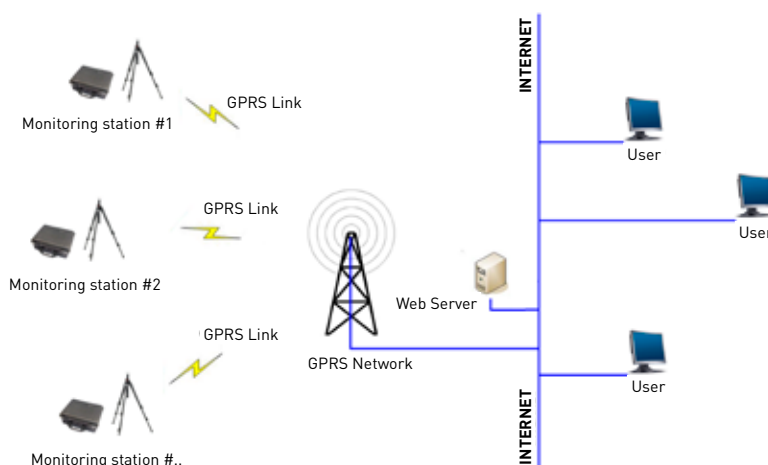
In the field of **transportation infrastructure** ACCON offers all services regarding noise and vibration protection, as well as assessments for air pollution control. For example, ACCON is able to assist with

site assessments, impact assessment, mitigation and construction environmental management throughout the whole planning and implementation process.

ACCON has a wealth of experience in designing, managing and operating tailor-made monitoring programmes on behalf of governmental departments, regulatory bodies and local authorities.

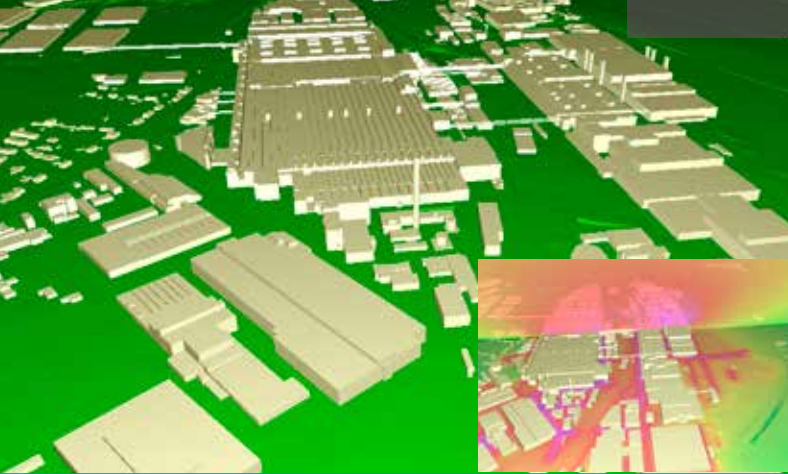
ACCON has a number of mobile long-term monitoring stations to collect all relevant environmental data.

WEB-BASED NOISE MONITORING SYSTEM ACCON ANM001



APPLICATIONS

- 2002/49/EC
- Real-time information to citizens
- Generic noise monitoring
- Transport noise monitoring
- Construction site monitoring
- Race track monitoring
- Monitoring of special events (concerts, etc.)



In the field of **machinery development** ACCON offers manufacturers services relating to the measurement of noise emissions from their products. ACCON can advise on the development of low-noise designs and can assist in developing an optimal approach to noise labeling in accordance with statutory requirements. In terms of factory and manufacturing planning, ACCON can assist with design, to ensure workplaces are designed for maximum safety.

With regards to **construction planning**, ACCON supports architects and planners with all necessary expert reports for room and building acoustics, thermal insulation certification and advice on structural dynamics and vibration protection.

INVESTIGATIONS ON AIRCRAFT NOISE

ACCON offers noise assessments for civil and military airports, airfields and heliports according to country-specific guidelines.

The services ACCON can provide includes the modeling of the airport, all arrival and departure routes with aircraft specific movements and the landside and airside ground noise. Furthermore ACCON can calculate and measure the noise in the area around the airport and can help design and implement a noise reduction plan or a sound insulation program.





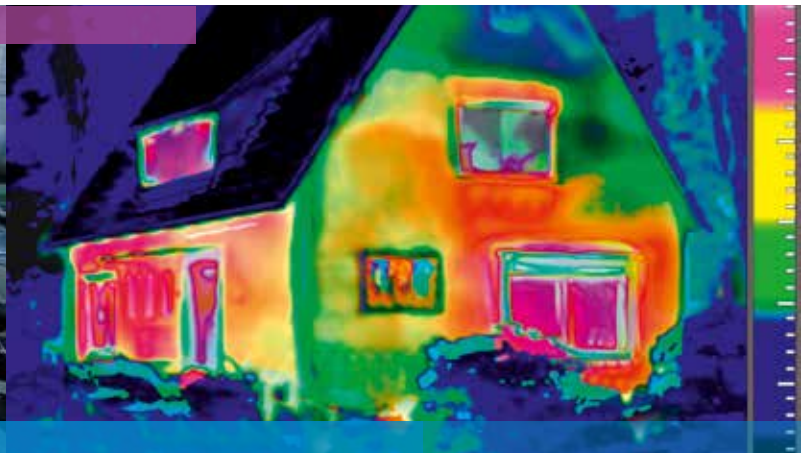
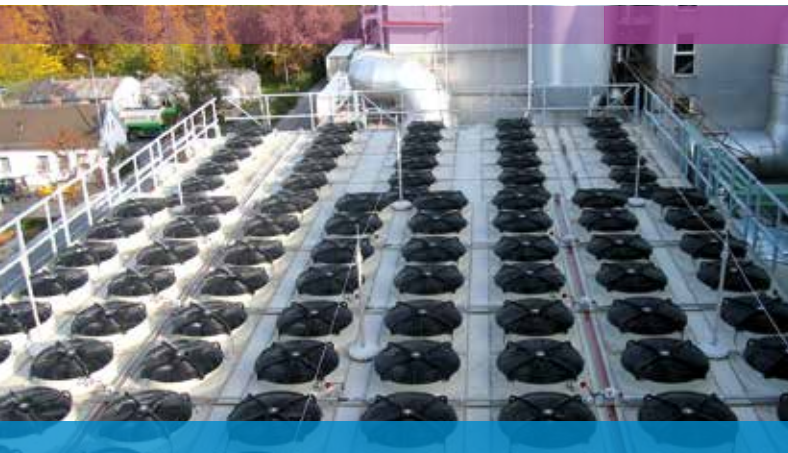
SERVICES

TRAFFIC NOISE

- Design of noise barriers
- Noise mapping
- Measurement of traffic noise
- Measurement of the acoustic quality of road surfaces
- Strategic noise mapping according to the European Noise Directive

NOISE OF SPORTS AND LEISURE

- Assessment of noise emissions for construction and operation
- Measurement and assessment of sports and leisure facilities
- Noise mitigation planning



INDUSTRIAL NOISE PROTECTION

- Expert reports for permission applications
- Measurement of noise emission (§§ 26, 28 BImSchG)
- Noise source identification
- Noise control using silencers and the sound insulation of exterior walls of buildings
- Acoustically optimized design of industrial facilities Acoustic planning of manufacturing facilities

BUILDING ACOUSTICS / THERMAL CONSTRUCTION PHYSICS

- Determination of constructional noise control according to DIN 4109 / VDI 4100
- Determination of sound transmission between rooms
- Building acoustic measurements according to ISO 140/717
- Design of structural elements for outdoor noise protection
- Design of vibration insulation for ventilation plants
- Thermal insulation certification
- Thermal bridge investigations
- Measurements of structure physics



ROOM ACOUSTICS

- Measurements of room acoustics in existing rooms
- Simulations of room acoustics for the design and planning of acoustic room qualities
- Planning of improvements for room acoustics noise

LIGHT POLLUTION / OVERSHADOWING

- Expert studies on light pollution
- Measuring of light pollution
- Optimization of lighting installations
- Simulation of overshadowing by buildings



SHOCK AND VIBRATION CONTROL AND BUILDING DYNAMICS

- Measurement of emission and immission (§§ 26, 28 BImSchG)
- Immission and emission assessment
- Supervision and monitoring
- Expert reports for planning purposes
- Expert assessments
- Design of anti-vibration foundations for machines and buildings

AIR POLLUTION CONTROL

- Assessment of emissions and immissions from industrial plants, roads and airports
- Odor emission surveys
- Calculation of stack emissions and expert reports
- Calculation of the air pollution caused by traffic flow / monitoring
- Air quality action planning for agglomerations



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