INROS LACKNER.
Consulting Engineers & Architects

MARITIME ENGINEERING AND PORTS

COMPLEX BUILDINGS

INFRASTRUCTURE

ENERGY, ENVIRONMENT AND SUSTAINABILITY

PROJECT AND CONSTRUCTION MANAGEMENT

APPROVALS MANAGEMENT






INROS LACKNER.
Consulting Engineers & Architects

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POINT OF VIEW

Container Terminal
in the Port of Luanda, Angola

Multifunctional building complex
„City Link Riga", Latvia

Construction of motorway A14,
Germany

Meeting growing demands

Today, major changes occur very quickly. Technological developments, environmental factors and process-/construction-related demands increasingly require individual solutions. Our architects and engineers rise to these challenges, and now bear more responsibility than ever before – a point that we fully appreciate.

Implementing environmentally friendly and sustainable-conserving solutions

Based on a widespread acceptance that the availability of many of the world's natural resources is limited, our value systems have changed, with wide-ranging consequences in the engineering world. Issues such as renewable energies, sustainability and energy efficiency are now key considerations in our daily work. In order to stay abreast of these developments, we aim to further develop our qualifications in these fields.

Diverse challenges and complex processes

Planning and managing our projects, many of them long-term, requires us to think in an anticipatory and integrated way. The focused collaboration of our architects and engineers in interdisciplinary teams enables us to offer technically, ecologically and economically optimal solutions.

Supporting our clients on the basis of our many years of project experience

We provide architectural and engineering services to address the challenging demands of public and private sector clients, all around the world. We are well positioned to do this thanks to our broad experience profile, gained during a period of over 75 years in the industry. We are active in all design stages, providing both specialised and general planning services. We offer comprehensive support, and contribute significantly to the success of construction projects with the help of our efficient approvals and construction management system.

Offshore wind farm Baltic 2,
Baltic Sea

Magdeburg railway junction,
Germany

Drainage Rehabilitation Works Beira,
Mozambique

> Our key principles include continually developing our engineering know-how and advancing our interdisciplinary way of working towards sustainable solutions. <

PROFILE

Continuity and change

PROFILE

MARITIME ENGINEERING AND PORTS

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PROJECT AND CONSTRUCTION MANAGEMENT

Complex planning and design services from a single source

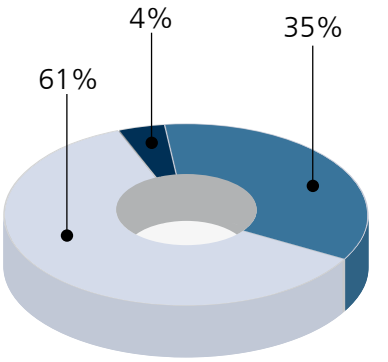
INROS LACKNER offers a wide range of technical and regional services, which has been continually developed during the company's long history. Our service portfolio is focused on planning and design in the following key areas: hydraulic / maritime engineering and ports, complex buildings, energy supply, environmental engineering and infrastructure. Our employees collaborate on interdisciplinary teams in each area, offering everything from general planner services to specialised designs.

Employees

Key to our success, and prerequisite for ongoing development, are high-level professional qualifications and staff continuity at both employee and management level. Experience is passed on and built upon. Today, more than 450 people are employed at 27 locations in Germany and abroad, responsible for the development and planning of projects. They have extensive technical knowledge, in many cases very specialised, which we bring together under one roof. Professional education and further training are thus of major importance, as are the promotion of an intercultural work environment and of teamwork and communication skills.

Quality management

Quality assurance is a continuous process. Our internal quality management system is certified in accordance with EN ISO 9001-2008.



> We manage, control and combine a variety of key engineering competencies in order to realise demanding planning and design projects. <

OVERVIEW

Locations and affiliated companies
INROS LACKNER's decentralised structure, with numerous locations, affiliated companies and international offices, enables us to efficiently realise our regional, national and international projects – close to our clients and familiar with local conditions.

- National offices
- International affiliated companies
- International offices
- International projects


RUSSIA
GERMANY
CZECH REPUBLIC
TURKMENISTAN
PAKISTAN
INDIA
VIETNAM
CAMBODIA
SENEGAL
GUINEA
TOGO
CAMEROON
CONGO
KENYA
TANZANIA
ANGOLA
MOZAMBIQUE

TRADITION

Past , present and future

The history of the company is characterised by periods of great change, shaped by war, reconstruction, reunification, globalisation and technological developments. All of these events continue to shape our company to this day, in various ways. New beginnings require us to deal with the past in a responsible way, while fast-paced technical and social developments demand that we constantly look to the future.

Tradition forms connections and builds trust

The company's foundations were laid in Bremen and Rostock. Prof. Dr. Lackner & Partner GmbH (1936) and Inros Planungsgesellschaft mbH (1950) were well-known engineering consultancies in West and East Germany respectively, and today they constitute the company's two main pillars. Their merger, together with the other engineering offices of the INROS Group, led to the establishment of INROS LACKNER in 2004, with the experience and capabilities of the various entities brought together "under one roof".

To reinforce established capabilities and develop new ones

Until 1990, the company's consultancy and planning/design services were focused on industrial construction, hydraulic/maritime engineering and port construction. In the mid-1990s, the market demanded change. The coordination services of a general planner were called for. To remain competitive, the company's range of services had to be extended. Areas such as transportation engineering, surveying, construction supervision and project management were integrated. Furthermore, new offices were established right across Germany, and the company's international activities were increased.

An experienced and successful alliance

The company's history demonstrates that its continuous development was only made possible by our high professional expectations and the strong spirit of cooperation among our employees and clients. We deal with increasingly dynamic market demands in a systematic way, enabling us to remain a capable partner for our clients.

1936
Establishment of the firm Agatz and Bock, predecessor of Prof. Dr. Lackner and Partner GmbH, Bremen

1937

First international contract, expansion of the seaport of Bangkok, Thailand, start of business in Asia

1950
Establishment of VEB IPRO, predecessor of Inros Planungsgesellschaft, Rostock

1953

Patent application for a "pre-stressed, anchored concrete dry dock"

> We look back with pride over our company's long and successful history. We have constantly developed ourselves through entrepreneurship and continuous performance at a high technical level. <

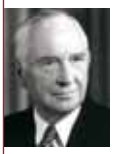
1960

Port Lomé, Togo, start of business in Africa

1964

First general planner role on a 145-hectare industrial area project

1965



Establishment of the Erich Lackner foundation

1983

Architecture award for "Shanty" garment factory, Rostock, Germany

1996

Introduction of quality management system in accordance with EN ISO 9001

2003

Merger to form INROS LACKNER

2004

Largest international building construction project with 60,000 m² GFA, National Convention Centre, Hanoi, Vietnam (in consortium)

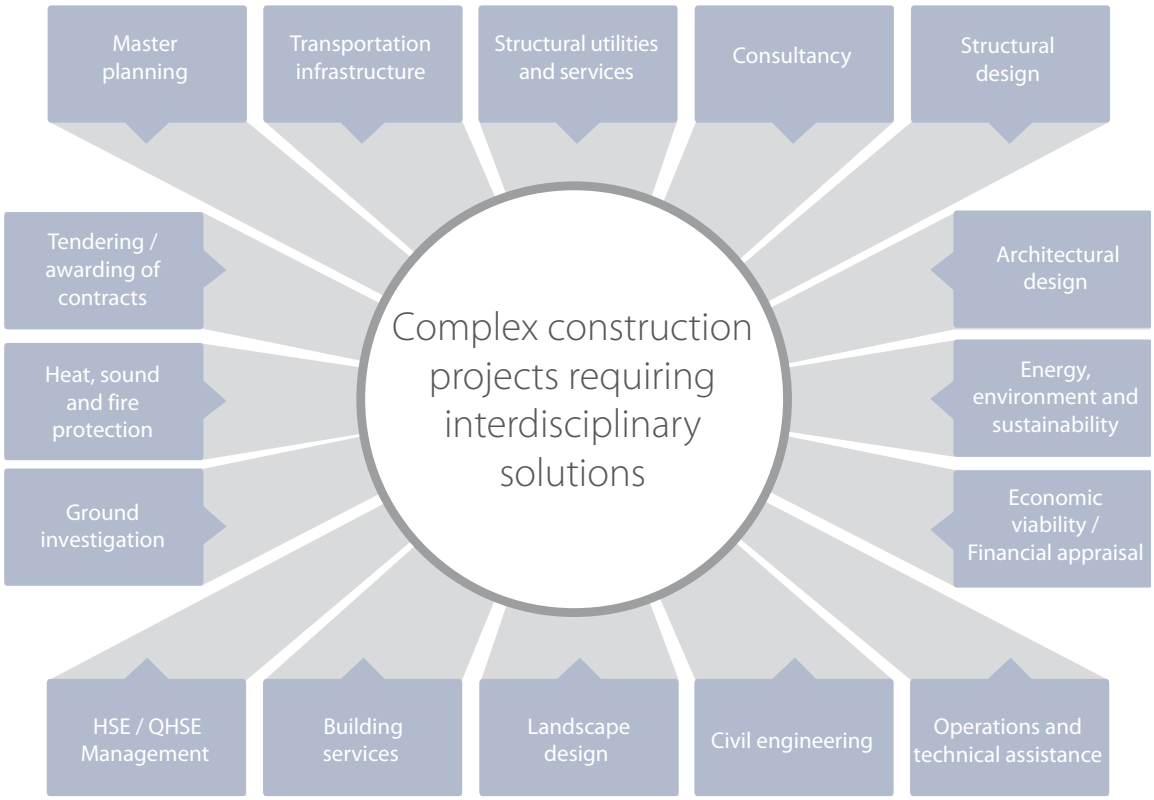
2007

2nd Prize at German Foreign Trade Awards

2011

Merger with Wisserodt Consulting GmbH and General Contract Ingenieurgesellschaft mbH

PLANNING AND DESIGN WORK - DETAILED OR GENERAL



Complex services from a single source

We can take on the role of planning and coordinating the whole project, or provide specialised services from all professional trades, applied in an interdisciplinary way. It is our task to advise and support in an integrated way, to realise complex planning projects and, above all, to coordinate the planning of all elements in such a way that problems and delays are avoided.

Combining various trades and functions

Our multidisciplinary project teams maintain an overview at all times and ensure that the right quality is achieved. Our architects and engineers are involved from the project's commencement until its completion and handing over to the client, ensuring a smooth, fast-track approval process and conformance with all contract requirements – on time and within budget. This demands extensive technical knowledge in all relevant sectors, and qualifications in various specialised disciplines. We also use an internally adapted quality management and documentation system, and standardised software.

> As construction projects become ever more complex, so too do the demands on clients. The role of General Planner is a future-oriented response to this development. <

COMPETENCIES

Extensive technical spectrum

MARITIME ENGINEERING AND PORTS

- SEAPORTS / INLAND PORTS
- INLAND / COASTAL WATERWAYS
- LOCKS / WEIRS / BARRAGES
- HYDROPOWER PLANTS
- SHIPYARDS / OFFSHORE BASE PORTS
- FREIGHT TERMINALS / FERRY TERMINALS
- COASTAL PROTECTION / PUMPING STATIONS / LAND RECLAMATION
- BREAKWATERS
- OFFSHORE STRUCTURES
- FLOOD PROTECTION / DYKES / FLOODWATER RETENTION BASINS
- MARINAS / PIERS
- FISH MIGRATION FACILITIES

> Water is one of the world's most vital resources, an important source of life and, in facilitating transportation, an economic engine of the future. <

Interdisciplinary specialist know-how in hydraulic and maritime engineering

We are involved in the construction and renovation of hydraulic and maritime structures and floodwater and coastal protection measures, and river engineering projects, all around the world. We have developed our capabilities in this field in the planning of numerous projects in both coastal and inland environments, and continually adapt them to meet the increasing technical and logistical demands of hydraulic and maritime construction.

Optimising goods transport

Currently predicted developments relating to transport demand future-oriented port policies. These include the ongoing development of ports as logistical service centres. Hydraulic and maritime engineers, together with transportation and port logistics specialists, develop proposals relating to the sizing of ports, waterways and locks. They plan and design the port facilities and all associated infrastructure and structures, and offer consultancy services relating to the adaptation of existing facilities as prompted by changing traffic flows and modernised handling technologies.

Integrating technical equipment into a project's planning and design

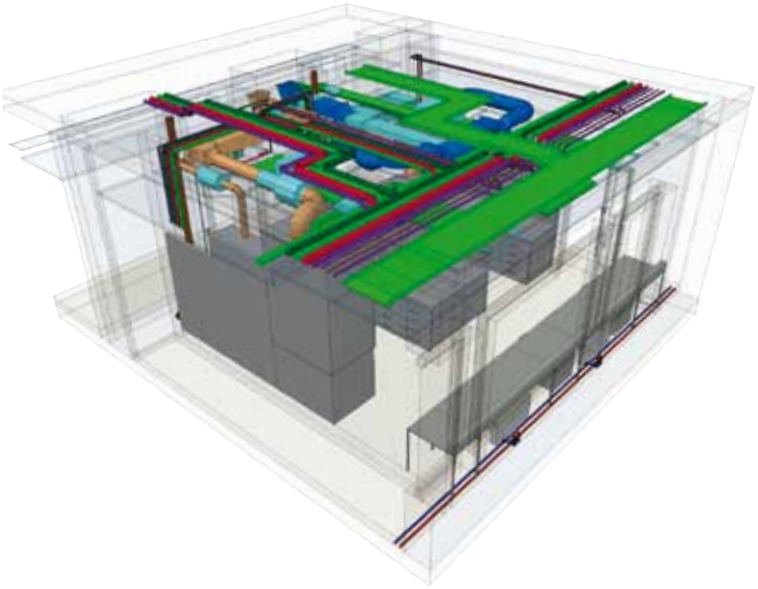
For construction and rehabilitation projects relating to hydraulic and maritime facilities, we plan the required mechanical, drive and control technologies and the necessary data collection and transmission equipment. We continually supplement our technical know-how in line with the latest technical developments.

Taming the forces of storm surges and floods

Rising sea levels, more powerful storms and the increasing construction of valuable urban facilities near waterfronts demand improved floodwater and coastal protection measures. It is vital that all relevant technical disciplines be integrated into the design process at an early stage, and that the appropriate simulation tests and numerical modelling be used. These offer the required planning certainty, and serve as a useful basis in the development of protection strategies.

COMPLEX BUILDINGS

INDUSTRIAL AND COMMERCIAL BUILDINGS
RESIDENTIAL BUILDINGS AND HOTELS
HOSPITAL BUILDINGS
EDUCATIONAL INSTITUTIONS
SPORTS FACILITIES
CONVENTION AND EVENTS CENTRES
MULTI-STOREY AND UNDERGROUND CAR PARKS



The development of living environments is a challenging task

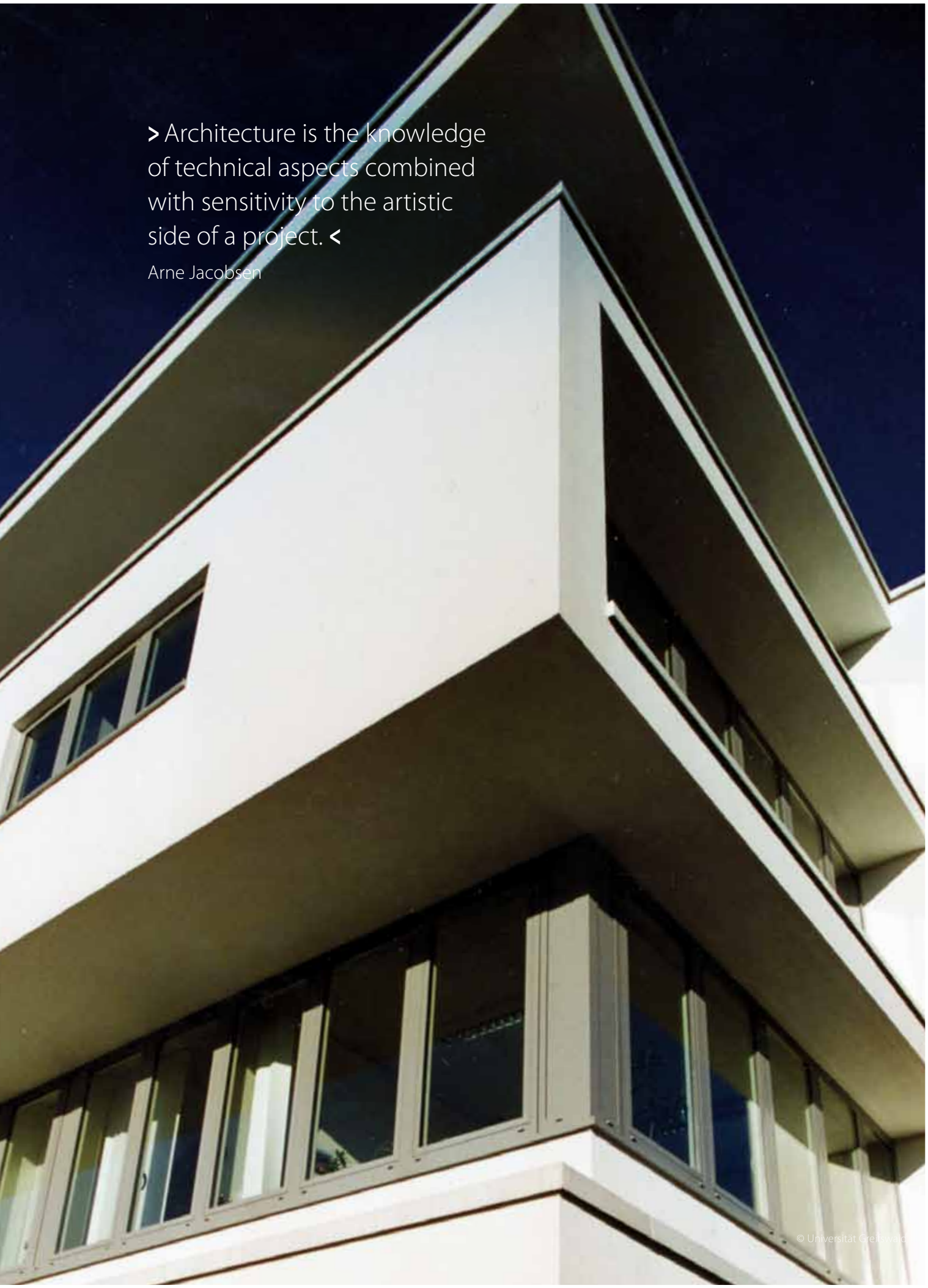
Building requirements are becoming ever more complex, and demand the application of specific technical know-how. This depends on the building's functionality and the economic viability of the project, whether it be new-build, rehabilitation or redevelopment. This requires the bringing together of a variety of tasks and roles. Our architects and engineers develop comprehensive concepts, with high aspirations in relation to architectural design. They plan and design well-engineered, modern building structures, optimising their energy efficiency.

Planning and designing well-engineered building structures

Already in the early design phase, our architects and engineers work closely with the structural designer. They are experienced in the use of a combination of construction materials, with textiles and glass becoming increasingly popular among the more established materials such as concrete, steel, timber and masonry. With the aid of FEM software, architectural visions and engineering challenges are transformed into structures. Spatial models enable conceptualised solutions to be clearly presented at an early stage.

Developing innovative building services solutions

The construction, modification and renovation of buildings present opportunities to utilise efficient and environmentally-friendly building services. We offer comprehensive solutions and develop multidisciplinary, energy-optimised concepts. In doing this, we consider the use, where appropriate, of renewable energies such as solar radiation and near-surface geothermal energy. Another important consideration is the development of a property-specific energy concept. This can provide the client with an objective evaluation of its existing buildings, taking account of current laws and regulations. This enables a future-proof solution to be developed, considering the appropriate economical, ecological and legal criteria.



> Architecture is the knowledge of technical aspects combined with sensitivity to the artistic side of a project. <

Arne Jacobsen

INFRASTRUCTURE

NEW INFRASTRUCTURE DEVELOPMENTS

HEAVY-DUTY SURFACING

NON-STANDARD FOUNDATIONS

WATER SUPPLY AND WASTEWATER FACILITIES

PIPELINE CONSTRUCTION

AIRPORTS

TRANSPORT FACILITIES / TECHNOLOGY

TRANSPORTATION STRUCTURES

MOTORWAYS, ROADS AND STREETS

RAILWAY LINE CONSTRUCTION AND RENOVATION

LIGHT RAIL / UNDERGROUND RAILWAYS

RAILWAY STATIONS / STOPS

COMBINED CARGO FACILITIES / MARSHALLING YARDS

Critical in attracting investments

Infrastructure developments make the affected areas suitable for building, transforming them into economically viable business locations. Residential and industrial areas must be adequately supplied with water, energy and heating, and the wastewater generated must be dealt with in an environment-friendly manner. INROS LACKNER offers a wide range of services, from land-use planning and infrastructure development planning to rehabilitation of existing facilities.

Expanding and optimising transport systems

Efficient transportation networks are increasingly important to our fast-paced society, especially considering the growing traffic volumes. They connect people, ensuring their mobility, and facilitate the transport of goods. The construction of new roads, railways and waterways can lead to targeted structural improvements for entire regions. Our specialist engineers contribute to the demand-oriented development of such transportation systems.

Conceptualising, designing and rehabilitating transport structures

Engineering structures such as bridges, tunnels, troughs, retaining walls and noise barriers are the most significant elements, from a design point of view, of our transportation networks. Our engineers plan and design the construction and renovation of structures, utilising technological advances to optimise safety and enhance design aspects. They are well-equipped to do this thanks to their extensive experience with different structure types and various construction and renovation methods.

Geographic information systems and 3D visualisations

With the help of 3D visualisations and versatile animations, engineering structure designs can be realistically evaluated and integrated into the built and natural environments. Complex proposals can be assessed and evaluated, quickly and accurately, using geographic information systems (GIS). GIS is used, for example, in acquiring data to support the rehabilitation and management of ageing building service networks.

ENERGY, ENVIRONMENT AND SUSTAINABILITY

- INFRASTRUCTURE PROJECTS
- DEVELOPMENT AND EXTENSION OF WATERWAYS
- SOLAR POWER PLANTS
- WIND ENERGY AND OFFSHORE FACILITIES
- GEOTHERMAL FACILITIES
- COMBINED HEAT AND POWER PLANTS
- GENERATING STATIONS / HYDROPOWER PLANTS
- ENERGY DISTRIBUTION NETWORKS
- BIOGAS FACILITIES

> More than ever before gaining the attention of the public and of politicians, environmental and energy-supply issues continue to increase in importance as planning criteria. <

Sustainable solutions for people and nature

Global environmental changes and ambitious climate targets demand new impetus and innovative solutions for how we manage the environment. In doing this, we must consider diverging interests. On the one hand, the fast-paced developments of the modern world demand quick actions and flexible methods, but on the other, the technical and legal requirements relating to environmental protection and nature and landscape conservation continue to grow. With such conflicting demands arising, it is especially advantageous to have an interdisciplinary and integrated approach that gives due consideration to all technical details, environmental issues and relevant approval processes.

Extensive knowledge of environmental protection measures

Environmental and landscape planning represent the basis for the integration of nature conservation and landscape preservation concerns into construction projects. Our aim is to maintain the ecosystem as a source of life to mankind and to ensure its long-term performance, while also ecologically supporting economic development in selected areas. In doing this, we make use of our extensive technical know-how and consider the latest applicable research results and legal requirements.

Planning and designing in a climate-conscious and sustainable way

Resource-saving energy generation, and in particular the use of renewable energies such as wind, hydro, solar and geothermal, continues to grow in significance. We offer comprehensive, competent consultancy services, from the planning and design of energy generation facilities to individual electricity supply solutions. This entails, among other aspects, comprehensive assessments of economic viability and the evaluation of public incentive programmes.

PROJECT AND CONSTRUCTION MANAGEMENT

PROJECT MANAGEMENT

TENDERING AND AWARDING OF CONTRACTS

SITE MANAGEMENT

SITE SUPERVISION

RAILWAY SITE SUPERVISION

PROJECT SUPPORT

DOCUMENTATION OF COSTS AND PROGRAMME

CONSTRUCTION AND CONTRACT LAW

CONSTRUCTION COST ANALYSES

CLAIMS MANAGEMENT

HSE / QHSE MANAGEMENT

Pulling all the strings

On a construction site, different perspectives and priorities come together. Our specialists can manage the entire tendering and contract award process, ensuring a smooth construction process. They develop a clear time and cost structure, and document and manage the construction programme and costs, and in doing so ensure that the agreed project goals are met. For us, transparency and regular discussions with the client are important. Because only when armed with current knowledge can the necessary decisions be made quickly and with confidence.

Coordinating services towards a common goal

Construction management forms the communication interface between clients, contractors and public interest representatives. Well-managed interfaces between the various parties bring the individual elements and trades together for a smooth construction process. By methodically anticipating and avoiding problems, we minimise disruptions to the construction programme. To support this goal, we have established guidelines in an internal INROS LACKNER manual, with individual checklists for each trade or function.

APPROVALS MANAGEMENT

PROCESS DEFINITION

DRAFTING OF APPROVAL PROCEDURES

DEVELOPMENT OF WORK PLANS AND TIME SCHEDULES

COORDINATION OF INVOLVED PARTIES

MANAGEMENT OF DOCUMENTATION

ANALYSIS OF APPROVAL DOCUMENTS

CONSULTATION WITH THE RESPONSIBLE AUTHORITIES

PROCESS SUPERVISION

PARTICIPATION IN PUBLIC CONSULTATIONS

EVALUATION OF DECISIONS

From the project's earliest stages to its approval

Between a project's commencement and its completion, all relevant approval procedures must be successfully managed. The course and duration of these procedures can be positively influenced by the early clarification and consideration of the applicable approval framework and requirements, and of local conditions. The involvement of appropriate specialists right from the beginning can help, not only to anticipate and avoid specific conflicts, but also to significantly improve the project's economic viability.

Efficiently managing the approval process

Although clients generally demand speed and flexibility, this is at odds with the increasingly demanding technical and legal requirements of environmental protection and nature and landscape conservation. INROS LACKNER plays a leading role in general construction and infrastructure projects, as well as industrial and commercial projects, all around the world. This requires extensive experience and knowledge of continually developing technical and legal circumstances. We offer comprehensive consultancy services, and accompany you through your approval process until its efficient and successful conclusion.

> Environmental experts are needed when it comes to support for regulatory approval processes. <

SELECTED PROJECTS

Local and global

SELECTED PROJECTS

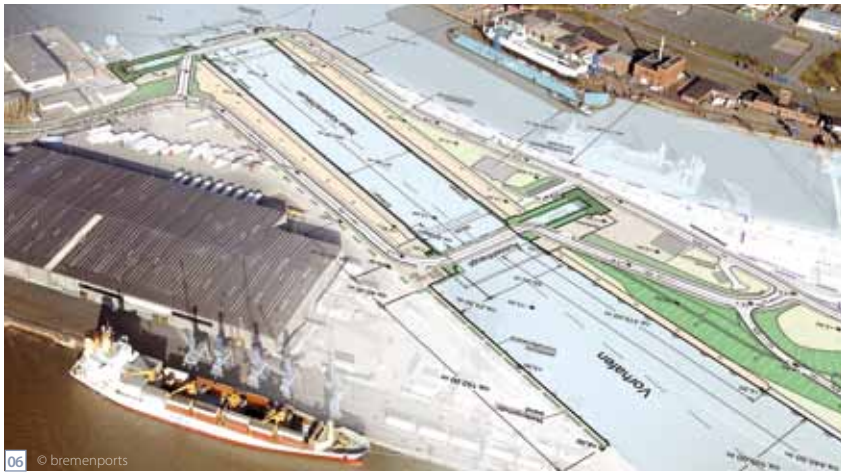

01 © JadeWeserPort Realisierungs GmbH & Co.KG

02 © Ansgar Maria van Treeck


03


04


05


06 © bremenports


07


08


09

10

11

12 © LMBV

13

14

15 © Brenner Basistunnel BBT SE

References

The following projects have been selected to give an impression of INROS LACKNER's technical and regional diversity. The services provided range from specialised planning and design work to the role of general planner.

01 JadeWeserPort, Wilhelmshaven, Germany

02 Esprit Arena, Dusseldorf, Germany

03 Cochin Shipyard, India

04 Motorway Bridge over a river, Germany

05 Railway junction, Magdeburg, Germany

06 Kaiser Lock, Bremerhaven, Germany

07 Baltic 1 and Baltic 2 offshore wind farms, Baltic Sea

08 National Assembly House Hanoi, Vietnam

09 A3 motorway, Frankfurt-Nuremberg, Germany

10 Mombasa Port modernisation, Kenya

11 Südstadt Hospital, Rostock, Germany

12 Lusatian lakelands, Brandenburg, Germany

13 Vinpearl Opera, Nha Trang, Vietnam (competition design)

14 Rehabilitation and Extension of the Port of Pointe-Noire, Republic of the Congo

15 Brenner base tunnel, Austria


16


17


18


19


20 © Airbus


21


22


23

Referenzen

16 New institute construction, University of Potsdam, Germany

17 Istrian highway network, Croatia

18 Turkmenbashi Port development, Turkmenistan

19 Coal-fired power station, Wilhelmshaven, Germany

20 Mercedes-Benz plant, Bremen, Germany

21 Hanoi city history museum, Vietnam

22 Limbé shipyard project, Cameroon

23 "Karachi Harbour Crossing" motorway connection, Pakistan

Legal structure
Public limited company
[Aktiengesellschaft]

Partners / shareholders
Current and former
company staff

Supervisory board
Dr. Peter Diesch
Winfried Koldrack
Uwe Lemcke

Company Establishment
1936

Publisher
INROS LACKNER SE © 2015

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