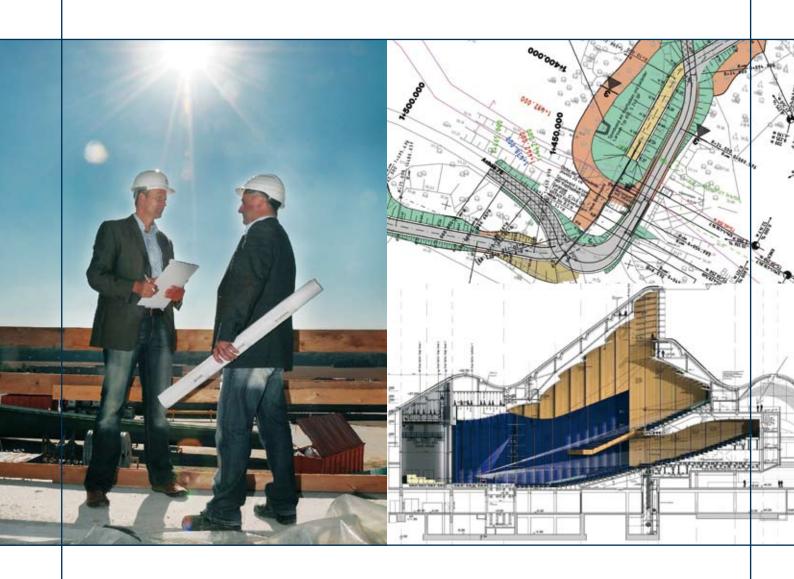
# INROS LACKNER AG.



## Contents



- 03 INROS LACKNER AG
- 04 Profile
- 06 Tradition
- O8 Competencies
  Hydraulic Engineering and Port Logistics
  Complex Building Planning
  Energy and Environmental Planning
  Infrastructure Planning
  Construction Management
  Approval Planning
- 18 Special and Master Planning
- 20 Employees
- 22 Selected Projects

## INROS LACKNER AG





(Left to right) Dr. Wolfram Tauer (Vice Chairman of the Board), Uwe Lemcke (Chairman), Thomas Prehn, Frank Bernhardt

## Meeting the growing demands for buildings

Today great change occurs with a very short time frame. Technical developments, environmental factors, process and structural engineering necessities require increasingly individualized solutions. INROS LACKNER AG is coming to terms with this challenge.

## Realising a wide variety of tasks and complex operational workflows

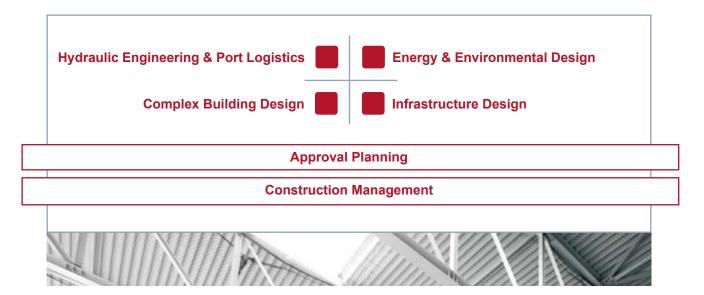
Planning and controlling project which often extend over a long time frame require foresight and networked thinking. With targeted cooperation among architects, engineers, environmental planners and experts in interdisciplinary teams, INROS LACKNER AG guarantees optimal technical, ecological and cost-effective solutions.

### Sophisticated consulting based on many years of project experience

With quality and vision, we perform demanding architectural and engineering services for both public and private clients worldwide. These services are based on the competencies and experience that have characterised INROS LACK-NER AG for over 70 years on the market.

Both in planning for specialised services and in master planning, INROS LACK-NER is involved in all of the design stages, provides comprehensive consultation and contributes significantly to the success of the building product in terms of efficient approval procedures and construction management.

Executive board of INROS LACKNER AG



The quality of our design is based on a combination of various core competencies in the areas of building construction, maritime and hydraulic as well as transport and civil engineering, environmental planning and construction management.



## Locations and affiliated companies

An efficient implementation of regional, national and international projects is guaranteed by the decentralized corporate structure with several locations, affiliated companies and international branches. We are always close to our customers and are familiar with local conditions.



## **Quality Management**

Quality assurance is a continual process for our company. Our internal quality management system is certified in accordance with DIN EN ISO 9001-2008.



## Affiliated companies, national

- GENERAL CONTRACT
- · Ingenieurgesellschaft mbH
- viaponti Ingenieurgesellschaft mbH
- · Wisserodt Consulting GmbH

### Affiliated companies, international

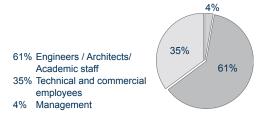
- iLi-Consulting Engineers Mekong Ltd. / Cambodia
- VIN Consult s.r.o. / Czech Republic
- INROS LACKNER Vietnam LLC / Vietnam

## International offices

- · Guinea Conakry
- · Cameroon Limbé
- · Lativa Riga
- Cape Verde Praia
- · Congo Pointe-Noire
- · Pakistan Karachi
- · Russian Federation St. Petersburg
- Togo Lomé
- · Vietnam Cai Mep

## **Employees**

Our highly-qualified employees are a vital precondition for our successful development – as well as the continuity in our staff and management structure. Experience is passed on and further developed.



## **Special and Master Planning**

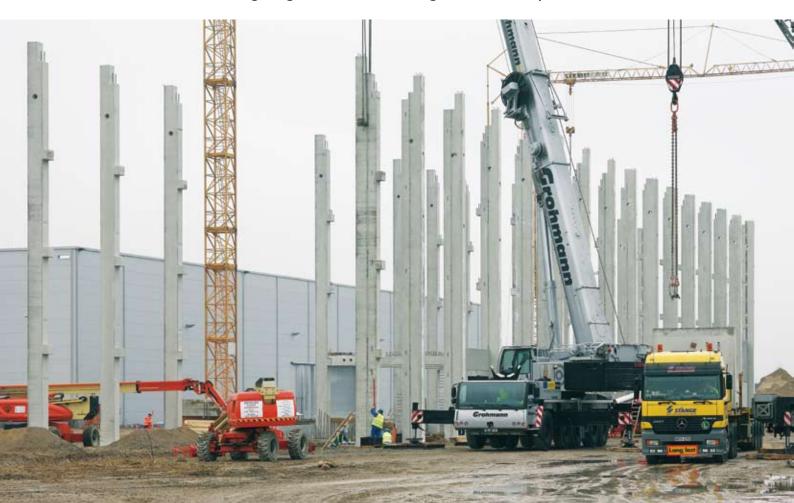
- Consulting Services
- Architectural / Urban development
- · Structural planning
- · Technical equipment
- Hydraulic engineering
- Port logistics
- Traffic engineering
- · Road traffic installations

- · Bridge and tunnel planning
- Civil engineering
- · Environmental planning
- · Foundation works / Geotechnics
- Surveying
- Tenders / Awards of contract
- Site supervision
- Construction management
- · Approval planning



Our business is based on our company's long history of success.

We have always continued to grow and develop through corporate initiatives and ongoing activities at a high level of expertise.



## Tradition





## Tradition provides connection and promotes trust

Our company, rooted in tradition, is based on two pillars: the Prof. Dr. Lackner & Partner GmbH (1936) and the Inros Planungsgesellschaft mbH (1950). From their fusion and the other engineering offices of the INROS group the INROS LACKNER AG was formed in 2004. Technical and professional expertise came together under one roof.

## Extending established ideas and developing new ones

Until 1990, the consulting and design services focused on industrial and port construction and hydraulic engineering. During the mid-nineties, the market demanded change. To remain competitive, the service offerings had to be extended. The coordination services offered by master planning were in demand.

### **Expanding the spectrum of services**

Step by step we expanded our offering of consulting and planning services. We added areas such as transport engineering, surveying, construction supervision and project monitoring. Furthermore, we added locations to cover all of Germany and increased our activities on the international level.

#### A combination of experience and success

Our company history shows that this continual development was only possible due to high professional standards and excellent cooperation with our employees and clients. We met and continue to meet the increasingly dynamic market requirements. This foundation allows us to maintain our position as an efficient partner for our clients.

## Highlights from our company history

First international contract, construction of the port in Bangkok, Thailand
 Patent application by E. Lackner for a dry dock, prestressed and anchored
 Master planning for the first industrial park (145 ha, approx. 360 acres)
 Erich Lackner Foundation established to foster outstanding scientific and technical achievements among young engineers

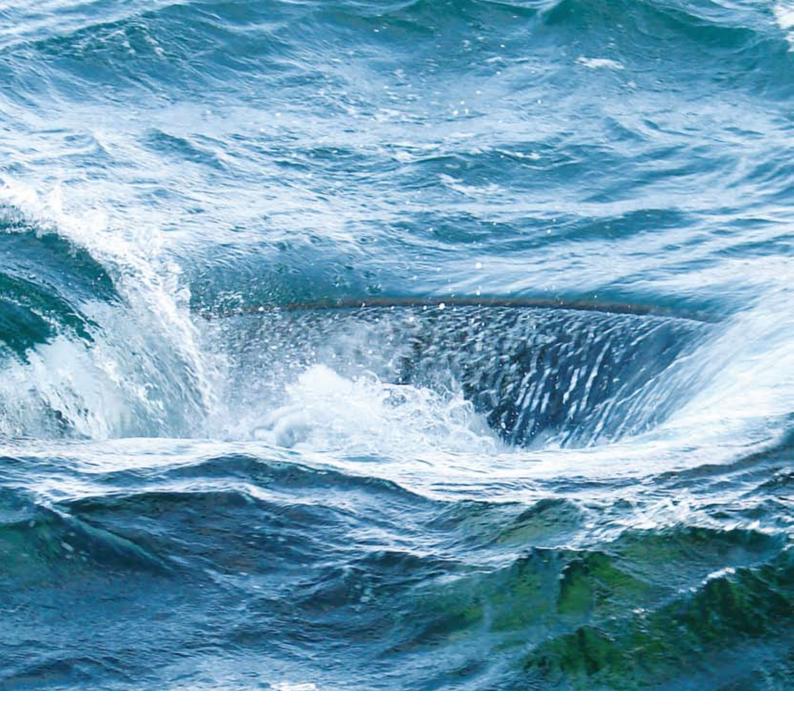
1983 Architectural award for the "Shanty" garment factory, Rostock

**1996** Introduction of the DIN ISO 9001 quality management system

2004 Largest international building construction project with 60,000 m² (approx. 650,000 sq. ft.) gross floor area, National Convention Center (NCC), Hanoi, Vietnam (together with gmp)

2006 Company's 70th anniversary

71



Water is essential to life and as a method of transportation it is one of the economic engines of the future.



## Hydraulic Engineering and Port Logistics





## Multidisciplinary, specialised knowledge in hydraulic engineering

INROS LACKNER AG has many years of experience not only in the evaluation of existing hydraulic structures and in the construction and extension of new ones, but also in construction supervision. This knowledge was acquired in the planning completed for coastal protection, sea and river ports as well as inland waterways.

## **Optimising commodity transport**

Hydraulic engineers and experts in transport and port logistics develop the basis for the dimensioning of ports, waterways and locks. They offer consulting services for restructuring existing facilities to adapt them to ever-changing traffic flows and modern transshipment technologies.

## Taming the forces of storm surges and floods

Climatic changes, the gradual rise in sea level and the increasing establishment of high quality facilities near the water require improved flood and coastal protection. Applying rainfall runoff models and numerical models for hydraulic calculations provide the necessary planning security.

### Integrating technical equipment into planning

We plan the required mechanical engineering, drive and control technologies as well as the installation of data networks necessary for construction and reconditioning measures for hydraulic structures.

## Planning for ...

- Flood protection / Dykes
- · Sea / River ports
- Flood retention basins
- Inland waterways / Ship locks / Weirs
- Marinas / Piers

- Shipyards
- Breakwaters
- **Jetties**
- · Offshore structures
- · Coastal protection structures

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## **Complex Building Planning**



## Designing living spaces is a challenging task

Harmonising quality and functionality with design while simultaneously ensuring economic success is a great challenge for our planners. Our architects and engineers develop integrated design concepts that insist upon combining architectural design elements with optimum energy efficiency for the building.

## **Developing sophisticated supporting structures** for buildings

In the very early stages of design our structural engineers cooperate closely with architects and engineers. Architectural visions and technical engineering tasks are converted into supporting structures with help of FEM-software. Spatial models provide an early visual representation of the design solutions.

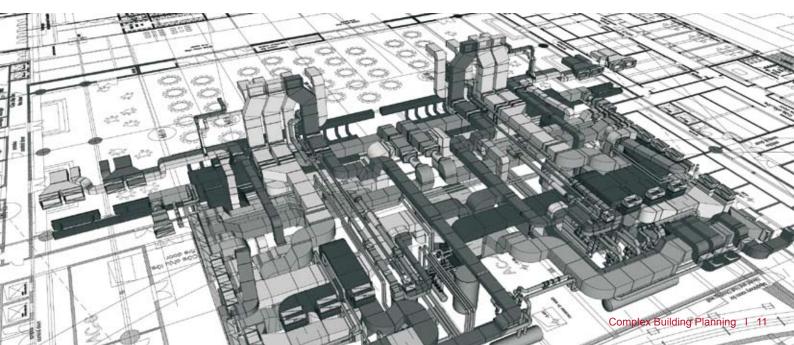
## Integrating and optimising energy concepts

Our engineers develop optimised energy concepts using software-based calculations that cover all technical aspects of the building. Focal points include not only the use of regenerative energy such as solar radiation and geothermal heat from just below the Earth's crust, but also intelligent control systems.

## Planning for ...

- Industrial and commercial buildings
- · Residential buildings and hotels
- Hospital facilities
- Educational buildings
- Sports facilities
- Convention and event facilities
- Multi-storey and underground parking garages

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Now more than ever, from a public and political perspective, environmental and energy concerns are increasingly becoming a critical factor for planning.



## **Energy and Environmental Planning**





#### Sustainable solutions for humans and nature

Environmental and landscape planning define the concepts and foundations for considering and integrating environmental protection issues and landscape conservation. Our goal is not only to maintain and ensure the long-term capacity of the natural ecosystem to function as part of the essential foundation for human life, but also to foster economic development in an ecologically responsible manner.

## Substantial expertise in environmental protection

The results provided by mapping flora and fauna form the basis for generating concepts for protection and development, investigations regarding type and tolerance, and impact and compensation planning as well as species protection. Expert knowledge, considering the results of the latest research and the current legal situation form the basis of our work.

## Reaping the benefits of integrated energy concepts

Global environmental change requires new ideas and approaches. Producing energy while protecting resources and using regenerative energy sources such as wind, water and solar power and geothermal heat are growing in significance. We offer comprehensive and professional consultation in the planning of facilities for energy production or for individualised solutions for power supply. The consultation includes detailed calculations regarding cost-effectiveness and the evaluation of public support programmes.



## Planning for ...

- Infrastructure projects
- Developments and construction on and near water bodies
- · Photovoltaic facilities
- · Wind power and offshore facilities
- · Geothermal facilities
- · Cogeneration facilities
- · Power plants / Hydropower plants
- · Energy distribution grids
- · Bioenergy facilities



Only after intense infrastructure preparation can land areas be turned into sites suitable for development or commercial and industrial use.

## Infrastructure Planning





#### Foundation for investments

Residential and commercial areas must have an adequate supply of water, power and heat and the wastewater must be disposed of in an environmentally responsible manner. INROS LACKNER AG offers a wide spectrum of services in this area, from land use and site development planning, to refurbishing existing sewage systems. The technical engineering services focus on the sustainable use of water resources and implementation of the European Water Framework Directive.

## Constructing and optimising traffic systems

The quality of the transportation infrastructure is a critical factor in social and economic development. Building new streets, railways and waterways, ports and airports can lead to targeted structural improvements for entire regions. Our transport experts as well as railway and road planners work to improve the demand-oriented extension and development of our transport systems.

## Designing, constructing and refurbishing transportation structures

Structures such as bridges, spillways, and supporting and noise control walls are the dominating design components in our traffic networks. Our structural engineers plan, construct and refurbish distinctive structures that combine technological progress, optimum safety and design aspects. The basis for their work is a wide range of expertise with various construction systems, supporting structures and restoration methods.

## Geographical Information Systems (GIS) and 3D

With 3D visualisation and animation, engineered structures can be evaluated in terms of real situations and can be classified among objects in both the constructed and natural environment. Geographical Information Systems can be used to understand and evaluate complex projects quickly, precisely and efficiently. For example, we use Geographical Information Systems assessing and then reconstructing obsolete sewage systems.

## Planning for ...

- · Infrastructural development
- Water supply and sanitation facilities
- Sewer rehabilitation
- Reinforcement of excavation pits
- · Heavy load areas
- Special foundations
- · Pipeline construction

- · Traffic installations and structures
- · Transportation structures
- · Motorways / Highways
- · Railway construction / Light rail structures
- Airports

## From project idea to notice of approval

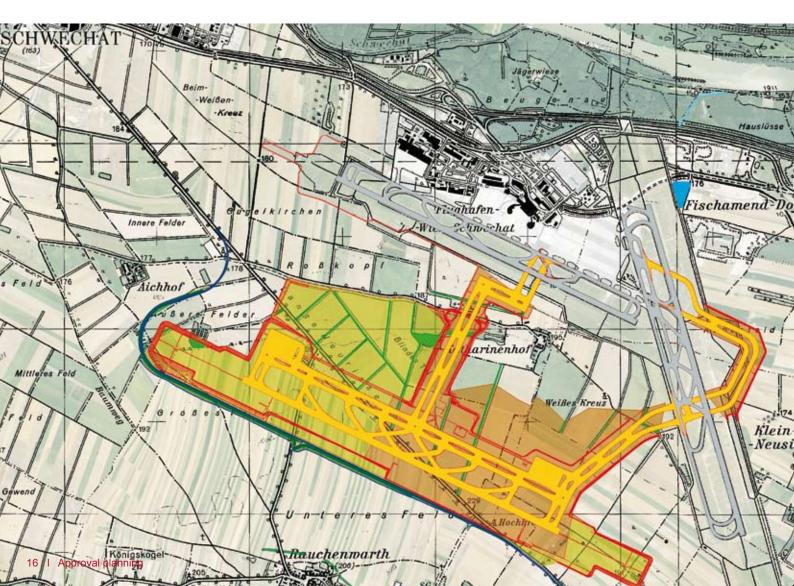
Between the project idea and its realisation lies the successful management of the necessary approval procedures. The content and duration of these processes depend on the scope of the project, the corresponding legal requirements, the planned location and the associated general conditions and planned use.

## Efficiently controlling the approval process

INROS LACKNER AG provides guidance for general construction and infrastructure projects as well as industrial and commercial projects. Among the tasks to be completed are clarifying the necessary processes with the appropriate agencies, preparing scheduling plans, filing the application, active involvement in matters of public participation, management of objections to the project and preventing third parties from making unauthorised demands on the project promoters. We offer complete consultation and, if necessary, we include other authorities and experts

in order to optimise the progress of the approval process.





## **Targeted coordination of services**

Construction management is the communicative interface between client, contractors and public authorities. The ongoing coordination of individual construction processes ensures that each project progresses smoothly. We consciously work to prevent problems as the project is carried out by predicting them before they occur. To support this demanding task, we have defined work guidelines with checklists in an internal INROS LACKNER AG handbook.

Keeping everything together for you

The experts at INROS LACKNER AG for tendering, contracting and construction supervision are involved in the whole process from the very beginning up to turning the structure over to the client. We develop a clear schedule and cost structure for you as well as document and control the building progress and the development of costs so we can ensure the qualities we agreed upon. Transparency

and regular communication with our clients are important to us.





## Special and Master Planning

## Complex services from a single source

INROS LACKNER AG takes over responsibility for coordinating and planning for entire project or for individual services that are part of our core competencies. As master planners we can strongly influence the quality of the planning, the project management, the decision-making process and the implementation. That requires close cooperation in multidisciplinary project teams. This cooperation yields synergistic effects and cost-effective solutions - an essential part of our work which contributes significantly to the success of the project.





## Special and Master Planning

## Combining a wide variety of qualifications

To successfully complete the tasks and services assigned to us, our employees combine sound, expert knowledge in all service and performance areas with qualifications in numerous specific disciplines. The quality of our master planning services is based on this combination of core and specialised qualifications. Our clients spend less time and effort on coordination activities. Our experts in both approval procedures and construction management are involved in the whole process from the very beginning up to turning the structure over to the client. They contribute towards an efficient and smooth approval process and to the project implementation according to the terms of the contract, within the agreed time frame and budget.









## Selected Projects



Iberotel Castelfalfi hotel complex, Tuscany/Italy, Technical building services and equipment



Deep water harbour, Wilhelmshaven, Design, construction supervision



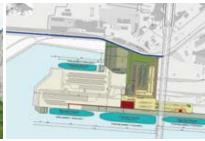
Construction of a bio-ethanol plant, Germany



Extension for Airbus production area, Hamburg, Germany Construction supervision



Motorway extension, Istrian Epsilon,



Cruise and Ro Pax Terminal, Riga, Latvia



Mill and silo complex, Kuwait



Rehabilitation of Port of Quelimane, Mozambique



Tunnelling under the Havel-Oder waterway, Germany



Hospital of Rostock, Germany, together with M+M AG



Railway and Ro-Ro ferry terminals, Ust-Luga and Baltiysk, Russian Fede-



National Convention Center, Hanoi, Vietnam together with gmp



Southern Karachi bypass "Karachi Harbour Crossing", Pakistan, together with



World Conference Center, Bonn, Germany Technical building services and equipment



**Container Terminal** Cai Mep, Vietnam

## **INROS LACKNER AG**



University Library in Rostock, Technical building equipment

## Organisation

Joint stock company

## Shareholders / Stockholders

Employees and former employees of the company

## Supervisory Board

Karl Schnabel (Chairman), Prof. Eckhard Gerber, Winfried Koldrack

## Company founded

1936



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