

INTEGRATED URBAN
DEVELOPMENT AND
CO-PRODUCTION
FOR INDIAN CITIES



AN INITIATIVE OF THE



Federal Ministry
of Education
and Research

Research in
Germany

Land of Ideas



CONTENT



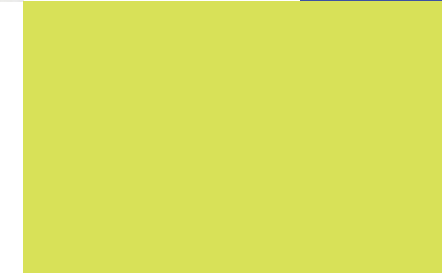
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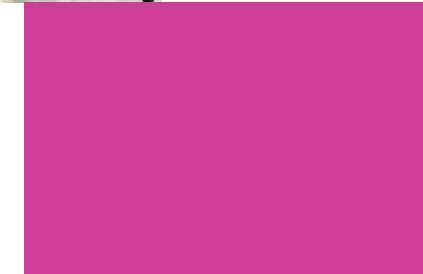
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ABOUT IGSI

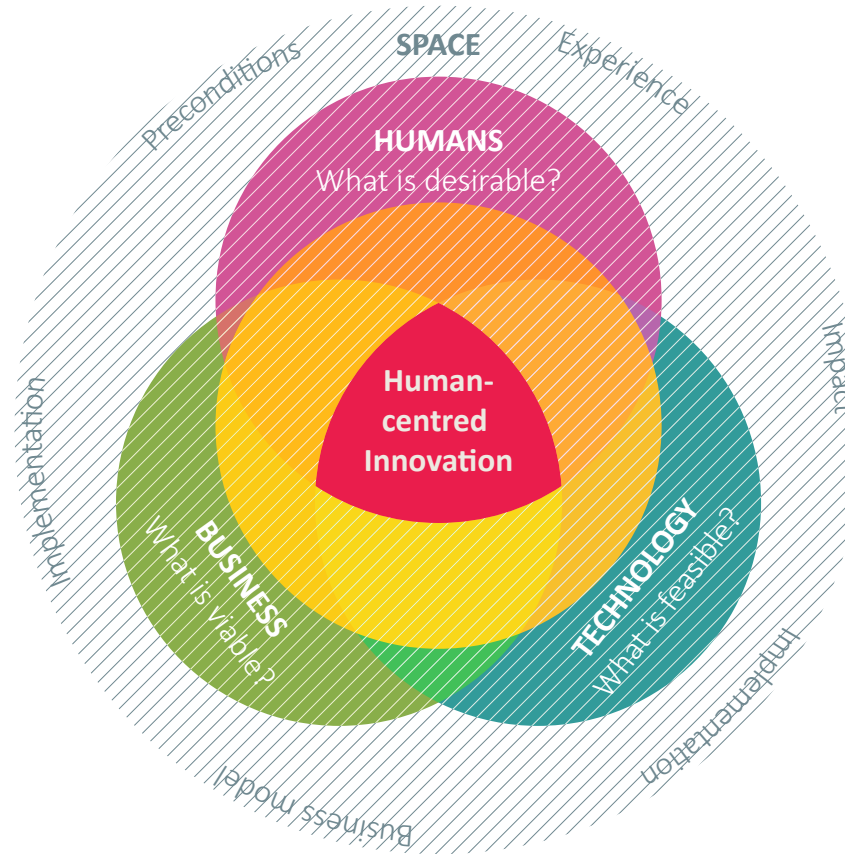
Founded by four Berlin-based architecture companies in 2014, the Indo-German Smart Initiative (IGSI) today is a broad network of German planning companies and research institutions that contributes as an interdisciplinary think tank to Indian urban development processes. IGSI recognises integrated planning as fundamental base of smart cities: Planning, which relates infrastructure and spatial planning with socio-economic development and unlocks new potentials by a goal-oriented use of technological solutions.



OUR APPROACH

With its integrated approach, IGSI can develop holistic solutions that are focusing on specific challenges of an urban setting. It is looking for an exchange of ideas with academia, planners, politicians, stakeholders and project developers for Indian smart cities.

Concept basis and starting point of the activities of IGSI is the principle of “human centred innovation”, which merges human needs, technical feasibility and economic viability to innovative solutions. Both, initial position and spatial and functional consequences of planning decisions, are consistently analysed and visualised. By this, results can be used as basis and for a transparent process of decision making.



OUR METHODS

IGSI strongly focusses on collaborative approaches to co-produce urban solutions and strategies. The concept of “Urban Design Thinking”, a method and planning tool developed at Technical University Berlin sets citizens as user and main designer of urban spaces in the centre of development processes. Dialogical events, called “UrbanLabs”, are crucial part of the collaborative process. Herein users, stakeholders and planners are jointly working together on specific problems and their solution.



OUR NETWORK



Aiming for an exchange of ideas with academia, planners, stakeholders and project developers in India, IGSi consists of a profound network that represents all relevant layers of a smart city. The companies of the network combine decades of experience with expertise in applied fundamental research, integrated strategies and solutions, able to accompany projects from concept design up to implementation.



*Dpt. for Urban and Regional Planning
Chair of Urban Renewal and
Sustainable Development*

The chair of Urban Renewal and Sustainable Development at the Department for Urban and Regional Planning has vast experiences in international research cooperation and project developments. Besides the various manifestations of global urbanisation and transformation processes, its focal point is the development of new methods of human-centric planning processes and strategies. In line with this, the chair developed and tested the concept of "Urban Design Thinking" which transfers collaborative approaches of product development into urban contexts.

Project Distribut is testing new potentials of electric cargo bikes in quarters of Berlin. As part of an innovative logistic system, they will contribute to sustainable deliveries of goods and people and herein enhance local qualities of life. Local habitants bring in their own ideas and experiences and develop the sharing systems in collaboration with companies and municipal administration.

Distribut^e
Green Neighbourhood
Logistics




**Migrants⁴
Cities**



Welcome Perspectives

ViWoWolfsburg 2030+ is a cooperation with the city of Wolfsburg aiming for new solutions in the fields of mobility, housing and energy. The project unlocks potentials of digitisation and co-creation by human-centred planning.

In the City of Mannheim, the project Migrants-4Cities unlocks the potentials of highly-qualified migrants to reflect on the sustainable development of our own cities. How will we work, live, cooperate, move or interact in future? In a series of UrbanLabs, migrants as part of the local society are developing innovative solutions for a sustainable tomorrow.


ViWoWolfsburg
2030+

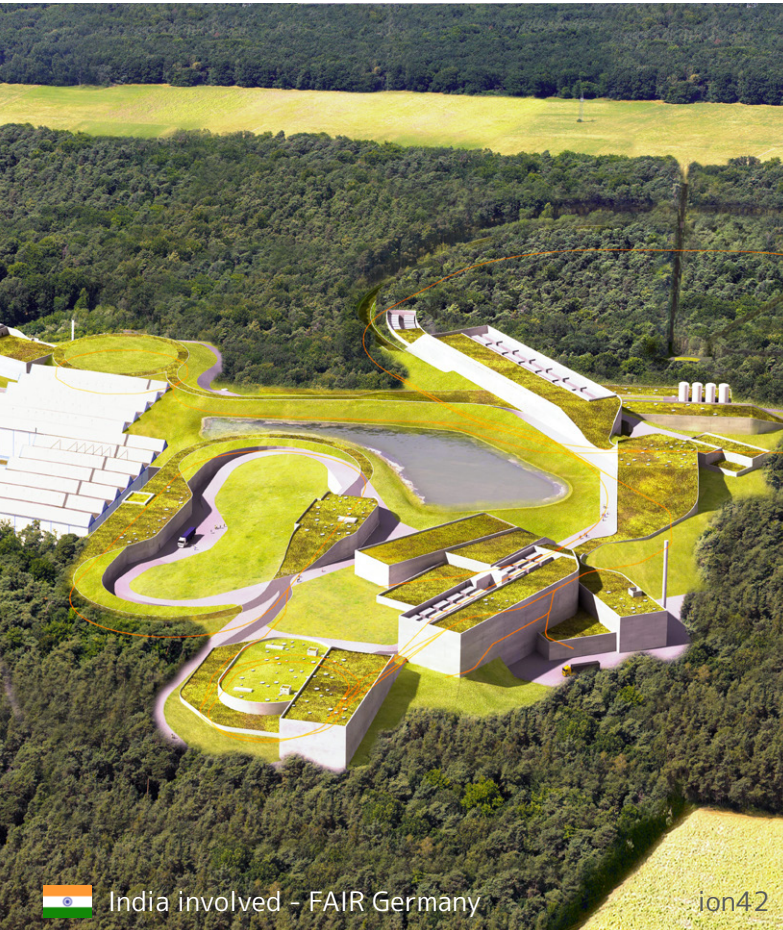


gmp, von Gerkan, Marg and Partners Architects, founded in 1965 by Meinhard von Gerkan and Volkwin Marg, with more than 500 employees in thirteen cities in Germany and abroad, is an architectural practice with a generalist position, taking on responsibility for a project from the design idea and its realization through to the interior design or master planning of cities. gmp has won over 720 prizes in national and international competitions, and has completed more than 410 projects worldwide. gmp is one of the co-founders of the Indo-German Smart Initiative, a group of German architects and engineers, aims to inspire and involve governments, companies and investors interested in the growth of the Indian economy and urban development.



The development of appropriate and acceptable answers and solutions for problems demands an openness for dialogue and the adaptation of one's standpoint to changing conditions. Society and its complex political and economic mechanisms decide what is being built in what fashion. Architects have not only the obligation, but the responsibility to lay ourselves open to this dialogue and take part in the discussions with a firm conviction.





India involved - FAIR Germany ion42



DGI Bauwerk

Architektur + Management

DGI Bauwerk is an independent architectural and general planning practice with headquarters in Berlin. With more than 30 years of professional practice we offer services from Demand Assessment and Feasibility Studies to General Planning and Project Management including Quantity Surveying.

As German architects and engineers we are used to play an important part in coordinating highly complex building projects. We see design as a contribution to an environment that is worth living in. We plan and realise buildings that are tailored to users' needs.

In the context of the different smart city typologies as inner-city areas, peripheral areas with connection to the city centre, urban extensions/ satellite developments or Greenfield developments DGI Bauwerk offers a holistic approach to implement sustainable buildings appropriate to the local cultural and climate conditions. We are used to the complex challenges in India. Our expertise in India in consulting, planning and construction management meets the objectives of practical and future-oriented integrated solutions in a human-centred dimension.





se•g architekten is a studio of highly motivated architects and designers formed around the two directors Christina Gresser and Philipp Eichstädt.

Our team has an international work background, with extensive work experience from Europe to India, including interior and architectural design, project management to implementation of residential, transport, commercial and strategic masterplan projects. Our motivation is to deliver designs, strategies and buildings of the highest standards.

se•g architekten



We are concerned about the environmental impact of architectural and town planning schemes, the use of materials, natural resources, social coherence, land and energy efficiency and are committed to minimise such impacts. The proceedings and proposed schemes of the "Smart City India" projects are looking to enhance the quality of life in urban hubs in many ways and not just in terms of energy efficiency through digital enhancements.

Our approach and aspiration is to listen to all stakeholder's requirements to develop smart solutions fit for the individual purposes and needs of a region, a city and a community.

PATZSCHKE

ARCHITEKTEN



The architectural firm of the Berlin twin brothers Jürgen and Rüdiger Patzschke was founded in 1968 and is characterised by a Classical-Traditional architectural language. Since 2002 a generational change has taken place. Robert Patzschke, Tatjana Patzschke and Till-Jonathan Patzschke now lead the design studio, together with partners Michael Mohn and Prof. Christoph Schwebel.

The operations of the offices include architectural services, both domestically and internationally. The focus of this work is on the design of hotels and resorts, as well as high-end residential and commercial buildings.



In over 15 countries Patzschke architects' designs emphasise vivid, nuanced and consciously-crafted details, which can be contrasted with modern, minimalist grid architecture.



They promote and support an architectural style that contributes to the enhancement and beautification of the living environment beyond its basic function.





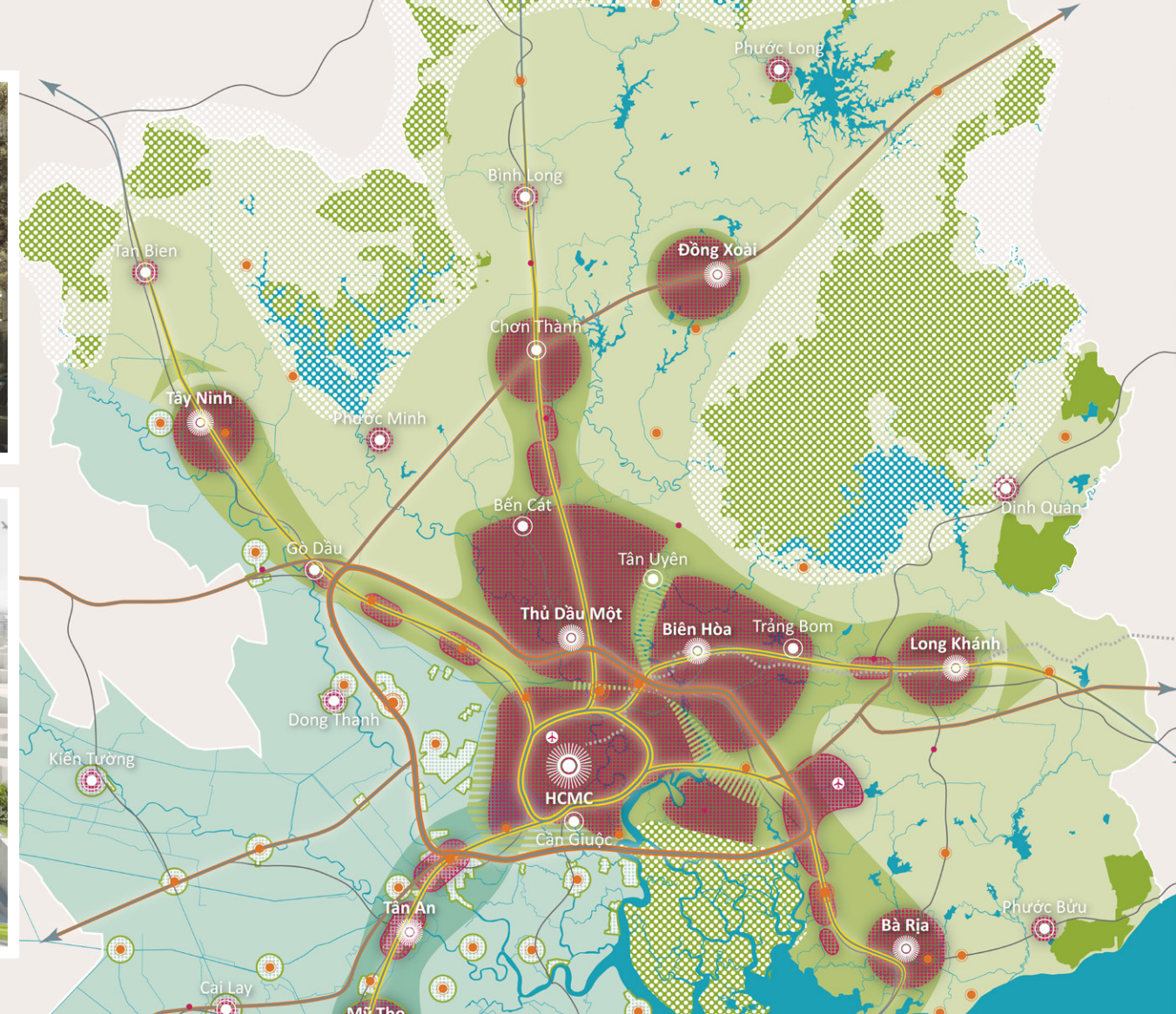
Since 1996 insar is working on integrated urban planning and design solutions for cities and regions on behalf of public and private organizations. Urban design is an integrative and creative process in which programme development and designing is combined and different stakeholders are actively engaged. We take over formal spatial planning processes, draft regulatory plans, develop integrated development concepts and conceive and moderate informal planning processes.

insar advises national and international authorities on projects and activities of urban and regional development and carry out and arrange know-how transfer in urban development, regeneration and spatial planning. Our previous projects cover the fields of:

Planning and Development
- Urban Design
- Integrated Urban Development

Research and Transfer
- Urban and Regional Research

Consultancy and Coordination
- Development Policies
- Development Consultancy
- Communication in Planning





REMONDIS®

WORKING FOR THE FUTURE

REMONDIS is one of the world's largest privately-owned recycling, service and water companies and provides services to around 30 million people. The Group has branches and associated companies in 33 countries across Europe, Africa, Asia and Australia.

Founded in 1934, this family-run business has a workforce of over 32,000 employees and an annual turnover of 6 billion euros (2015). REMONDIS focuses on developing partnerships to implement novel and forward-looking concepts and ideas to help conserve our raw material and water supplies for future generations.



For over 25 years, Harbauer Environmental Technology develops and builds innovative technology to decontaminate air, water and soil in Germany, India and soon Brazil.

Hereby we aim to protect our environment, relieve polluted ecosystems and thereof affected humans. Harbauer provides modular plant technology adapted to particular situations.



From the planning stage to the operating stage, Harbauer Environmental Technology provides process engineering solutions that meet the highest requirements.

„...Groundwater is the ideal drinking water. It has a neutral taste, is clear and contains essential minerals. Rivers and lakes are ecosystems which also have a major role in



our water balance. Yet human behaviour and the addition of pollutants bring these systems into imbalance. Where groundwater is polluted and bodies of waters are contaminated, we offer a wide range of experience in treating large bodies of water, purifying groundwater and restoring bodies of water to their natural function...”

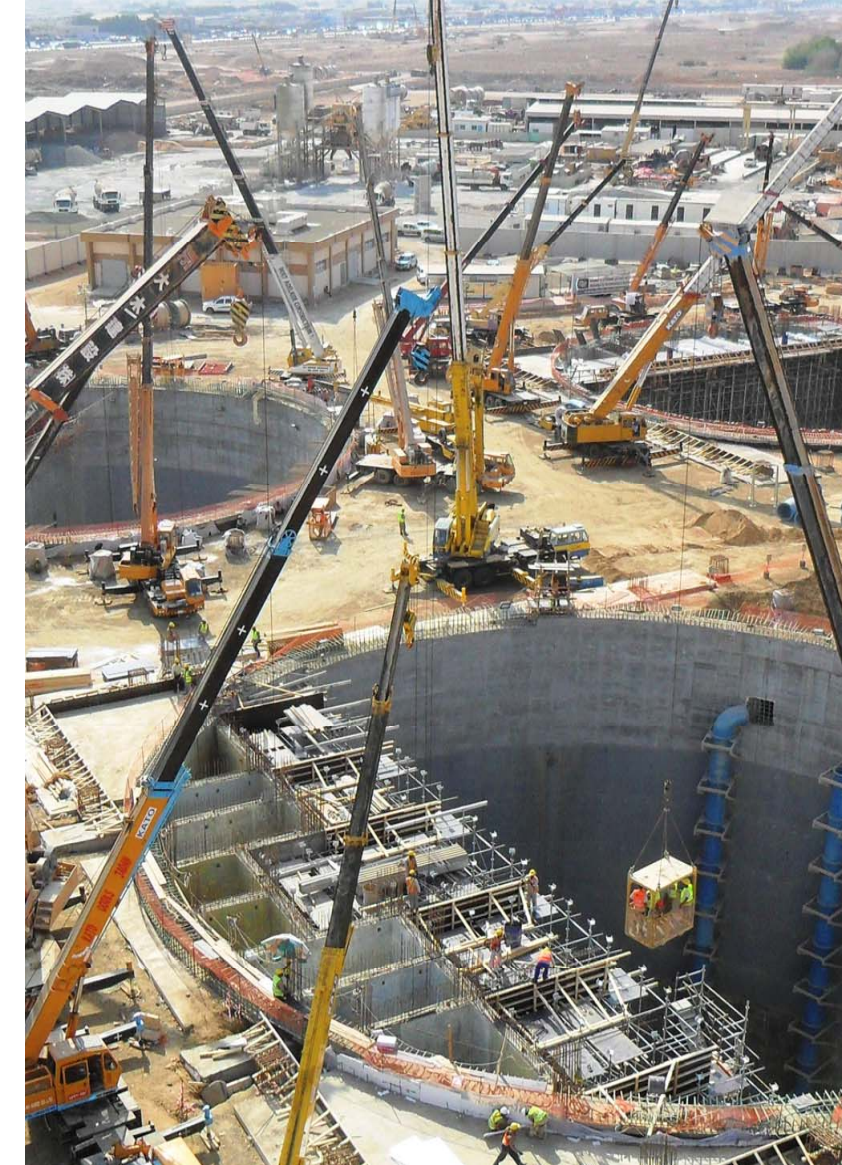


p2mberlin

p2m berlin GmbH is a consulting and engineering company which offers expert services in the water and wastewater sector, covering all project stages from feasibility study over design to construction supervision.

Within their projects, p2mberlin implements the engineering and economic knowledge of 150 years in water supply and sanitation operation in Berlin of the entire Berlinwasser Holding, and therefore offers appropriate intelligent solutions for the national and international markets.

SmartCity in the water and sanitation sector is to us the challenge to find the intelligent solutions to connect new technologies with the existing structures for drinking water production and supply as well as wastewater disposal and reuse. By this we will achieve the objective to utilise the most important resources, water and energy, highly efficient. In order to make this challenge possible, our multi-national human resources consist of experts from a wide range of technical disciplines for the design and implementation of tailor made solutions for the integrated water and wastewater management.



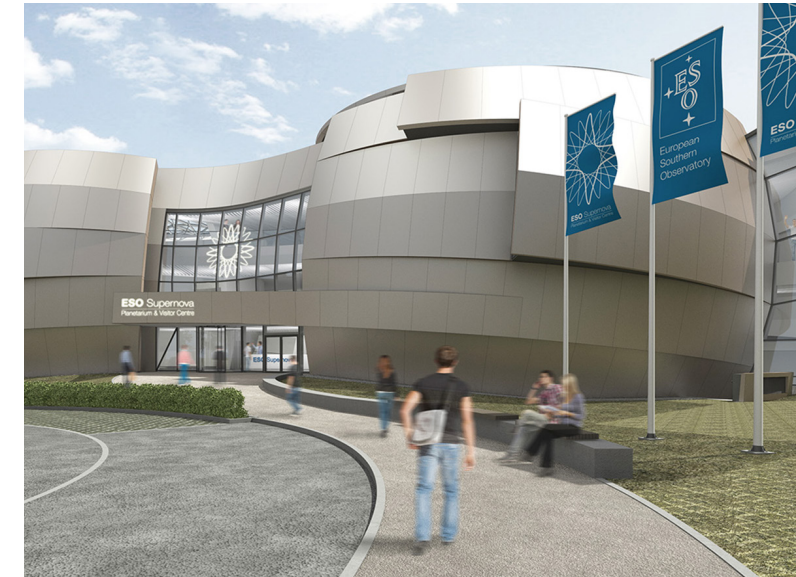


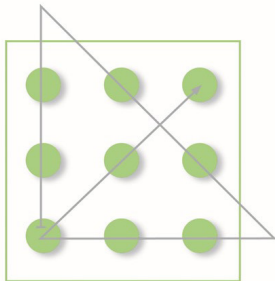
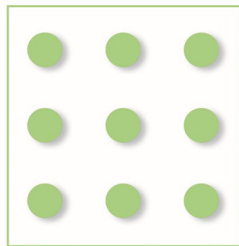
The Ingenieurbüro Hausladen has been developing and implementing holistic building concepts for 30 years. The focus is on efficient strategies that are based on passive buildings, space conditioning systems and regenerative energy supply.

Crucial for the office's work is the interdisciplinary planning process to answer the questions about the necessary level of domestic engineering systems. The goal is their integration into building structures in so that durable and long-lasting buildings are created.



**ingenieurbüro
hausladen gmbh**





KLAUS HOPPE CONSULTING

Energy solutions for cities

Klaus Hoppe Consulting (KHC) is working at the interface between municipalities and service providers - from industry to research - for sustainable and smart city solutions. With more than 20 years' experience in municipal processes and structures, KHC is experienced in facilitating joint solutions in the field of sustainability and smart city projects on a national and international level.

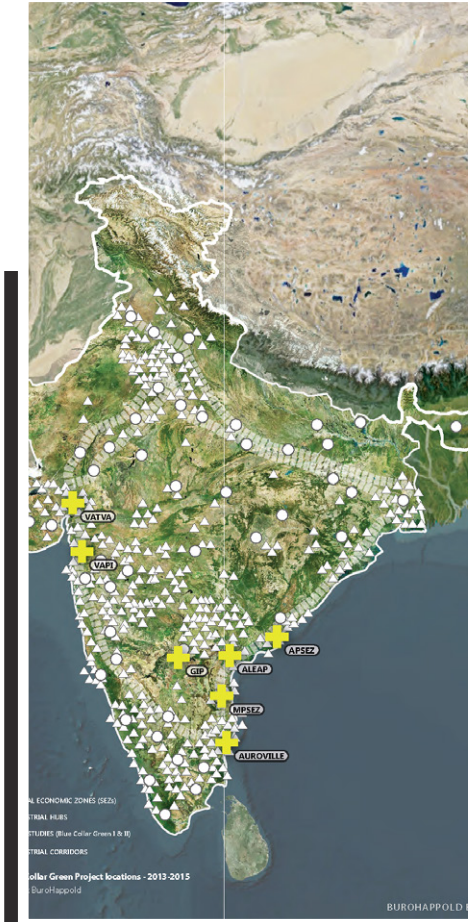
The development of integrated solutions that fit the overall sustainability strategies of cities (and their inhabitants) requires a mutual understanding from all stakeholders: Municipality, industry, research citizens and NGO. Understanding a city's administrative and political processes is crucial for successful partnerships. Moreover, new structures - like Special Vehicles (SUV) in India's "Smart City Initiative" - affect and change the previous "system" of cooperation. Successful project implementation has to incorporate these aspects from the very early stages.

BUROHAPPOLD ENGINEERING



BuroHappold Engineering is an independent, international engineering practice that over the last 40 years has become synonymous with the delivery of creative building and city solutions. Having worked on every continent, our clients include the world's leading architectural practices. Founded in 1976 in Bath, BuroHappold today employs over 1,600 staff globally in 25 locations worldwide and is at the forefront of multidisciplinary engineering, designing and consulting companies.

We believe that being 'Smart' is more than just technology; it is about creating liveable, equitable, and sustainable cities where technology is first and foremost an enabler to support solutions for addressing urban challenges in India like depletion of resources (financial and environmental), inequality, and climate change. Increased access to data and improved communications, for instance, provides the opportunity for citizens to interact with each other with more efficiency, and to the greater benefit of all.





Innovation Centre for Mobility
and Societal Change **innoZ**

As a research and consulting company, the Innovation Centre for Mobility and Societal Change (InnoZ), together with industry, science, administration and users, is developing innovative systemic solutions in the field of mobility by uniting application-oriented research and practice under one roof.

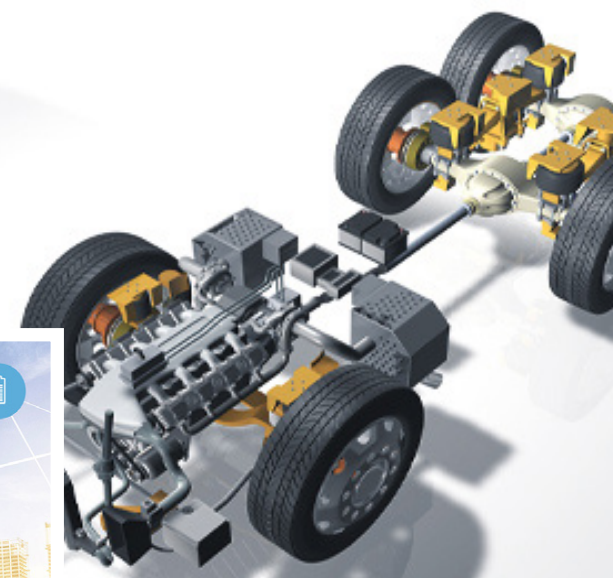
The InnoZ conducts research on future mobility in the context of social change and coordinates complex overall projects by combining transport, energy and ICT as related systems.

The digital revolution has also captured the transport and energy sector and offers completely new mobility options and energy solutions through big data tools, tracking tools, information systems and renewable energy systems. The research on smart cities issues addressed at the InnoZ can play a major role in the global economy. India, as one of the most important emerging markets, offers a great opportunity to pilot and implement the knowledge tested in Germany in an international context.



Our engineering is at the heart of vehicles across the globe. As one of the leading development partners to the automotive industry, IAV offers more than 30 years of experience and a range of skills second to none. With our expertise in the entire vehicle, and the passion to match, we provide technically perfected solutions that balance both rational and emotional aspects.

Employing 6,500 members of staff and first-class facilities, we assist manufacturers and suppliers in carrying out their projects wherever they are in the world – from concept to start of production: Your goals are our mission.





© Andreas Caspari

Highly qualified German engineers who are working in the field of waste management for more than 20 years constitute *von kories consultants*. Tailoring the waste management systems of emerging and developing countries to deliver the best available yet affordable solution is our key driver.

Our scope ranges from landfill mining, over logistic optimisation to the planning and commissioning of waste treatment facilities, hence, we can cope with almost every challenge in the waste management realm.



Can you call a smart city smart if the daily living requirements of the citizens are not fulfilled comprehensively? We would say no. And does waste disposal belong to those requirements?

We think, yes it does. Digging for reusable or flammable items in urban landfills or co-generating heat and power from waste which industrial consumers can utilise in their facilities might not seem smart, yet it would fulfil both economic and environmental requirements of any citizen in any smart city.



A R G U S

Argus was founded in 1976 as a scientific study group at TU Berlin and is since 1999 a limited company. Our main fields of activity are collection and management of data on waste, statistical analysis of environmental data, development of specialised software, studies and consulting on waste management and public health issues.

Our clients are: European Commission, Eurostat, German Federal Environmental Agency, German States, Waste Management Companies, Consultants, Municipalities and others.



Our main objective in the Smart City India project is to gather waste data to develop a waste management concept for MSW in India. The method is shown in the diagram. The focus of the concept is the protection of human health and environment, safeguard of disposal security and a reduction of landfilled waste. Further objectives are to strengthen the waste management in India and to explore the possibility of gaining profit from recycling waste. Finally, continuous contacts between Indian and German waste disposal companies should be established during the implementation of the project.

TOWN SITE OF
PLANNERS, INDIA
QUALITY COUNCIL CITY
CENTRE FOR
INFORMATION



IGSI Indo-German Smart Initiative



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