

aqua & waste International GmbH

INNOVATIVE. ENVIRONMENTAL. SOLUTIONS.



- *Project Presentation* -

Peter Althaus  
Enexio Water Technologies GmbH  
formerly known as GEA 2h

Supported by:



based on a decision of the German Bundestag

# INTRODUCTION

## ShowCaseIN

*One project to achieve several goals – ShowCaseIN aims to develop state-of-the-art wastewater treatment infrastructure, promote environmental and human well-being, and achieve knowledge anchoring by applying the best German technologies adapted to the local context in India.*

*An initiative by the German Water Partnership, Regional Forum India, supported by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany.*

- ✓ Focus on holistic treatment approach: interdependencies of different treatment steps ensuring sustained effluent quality over a long period of time.
- ✓ Ensure proper O&M for longer plant life through appropriate capacity building
- ✓ Address surrounding issues such as sanitation and hygiene, water security, and climate change resiliency.
- ✓ Knowledge transfer and anchoring: layout & design principles, appropriate O&M
- ✓ Lighthouse project: Flexible technical concept to ensure adaptability to local conditions as well as replicability to other regions.

## AT A GLANCE

### Technical Concept



Conceptual technical design of the ShowCase wastewater treatment plant adapted to local conditions

### Knowledge Transfer



Development of a capacity building and training concept incorporated in the ShowCase Plant

### Standardized Guideline



Lighthouse Project: Development of a step-by-step guideline enabling a systematic concept transfer to other locations

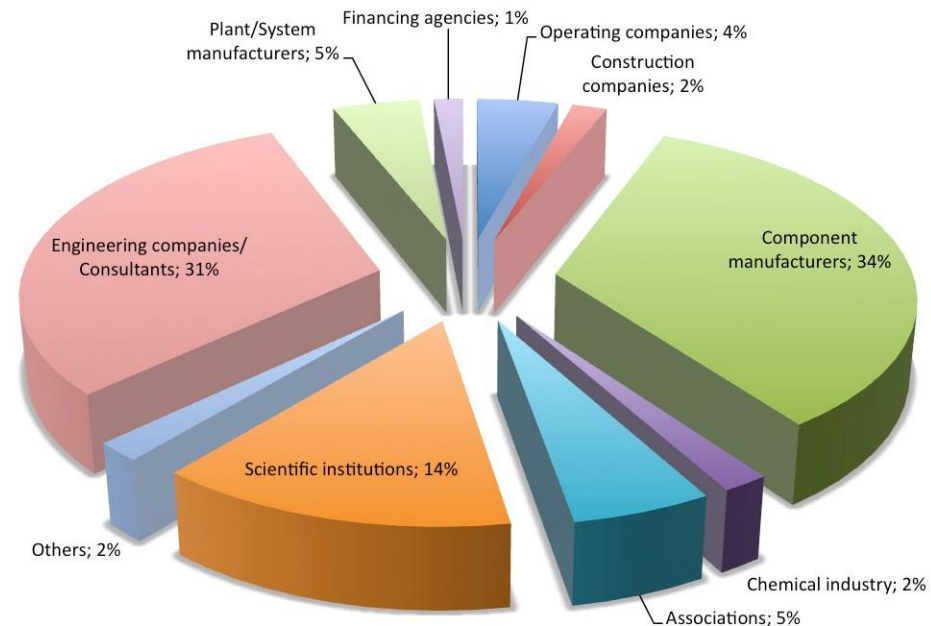
## OBJECTIVES

- Functional, non-profit application and establishment of sustainable wastewater treatment technologies in India.
- Improvement of the environmental conditions on-site and promotion of hygiene through modern wastewater treatment.
- Promoting energy-efficient treatment processes.
- The upgrade of an existing wastewater treatment plant or a new plant as a showcase plant by developing a holistic technical and educational concept adapted to the regional context.
- Use of the showcase plant as a training center for knowledge transfer and knowledge anchoring in India.
- Use of the project as a Lighthouse to ensure replicability to other regions.

# GERMAN WATER PARTNERSHIP

**350 members** covering a broad range of German water management, industry and research:

- Research institutes and universities
- Plant manufacturers, construction companies and component manufacturers
- Consultants and engineers
- Utilities and financial service providers
- Organisations of development cooperation



75 % are small and medium sized enterprises

# GERMAN WATER PARTNERSHIP

- **Working groups**

Subject-specific working groups: Agricultural Irrigation, Operation and Capacity Development, Water and Energy, Water 4.0, Innovation & Scientific Cooperation, Capacity Development

- **Regional sections**

15 Regional working groups focusing on exchange of experience and project development

- **Joint presentation and representation**

Trade fairs, congresses, conferences, events, delegation trips



# GERMAN WATER PARTNERSHIP

## Associations, Chamber of Commerce, Organisations ...



## German Federal Ministries



## PROJECT TEAM

### Project coordinator



**Prof. Dr.-Ing. Peter Hartwig**

aqua & waste International GmbH  
Mengendamm 16 D, D-30177 Hanover, Germany

Web: [www.aquawaste.de](http://www.aquawaste.de)

E-Mail: [hartwig@aquawaste.de](mailto:hartwig@aquawaste.de)

Tel.: +49 (0) 511 / 132 221 – 80

### Project partner



**Dr.-Ing. Michael Kuhn**

KUHN GmbH Technische Anlagen  
Franz-Kuhn-Straße 1-3, D-74746 Höpfingen, Germany

Web: [www.kuhn-gmbh.de](http://www.kuhn-gmbh.de)

E-Mail: [MKuhn@kuhn-gmbh.de](mailto:MKuhn@kuhn-gmbh.de)

Tel.: +49 (0) 6283 / 2201 – 0



## PROJECT TEAM



### **Peter Althaus**

ENXIO Water Technologies GmbH formerly known GEA 2h  
Dieselweg 5, 48493 Wettringen, Germany  
Web: [www.enxio-water-technologies.com](http://www.enxio-water-technologies.com)  
E-Mail: [peter.althaus@enxio.com](mailto:peter.althaus@enxio.com)  
Tel: +49 2557 9390 39



### **Julia Braune**

German Water Partnership e.V.  
Reinhardtstraße 32, 10117 Berlin, Germany  
Web: [www.germanwaterpartnership.de](http://www.germanwaterpartnership.de)  
E-Mail: [braune@germanwaterpartnership.de](mailto:braune@germanwaterpartnership.de)  
Tel.: +49 30 300199-1220



### **Dr.-Ing. Marius Mohr**

Fraunhofer Institute for Interfacial Engineering and Biotechnology  
IGB Nobelstraße 12, 70569 Stuttgart, Germany  
Web: [www.igb.fraunhofer.de](http://www.igb.fraunhofer.de)  
E-Mail: [marius.mohr@igb.fraunhofer.de](mailto:marius.mohr@igb.fraunhofer.de)  
Tel.: +49 711 970-4216

## FURTHER INITIATORS



More Information: <https://showcaseindia.aquawaste.de/about-the-project/who-we-are/>

## ASSOCIATED PARTNERS



BETTER CONTROL. BETTER ENVIRONMENT.



More Information: <https://showcaseindia.aquawaste.de/get-involved/german-water-sector/>

# WORK PACKAGES

## WP1 – Project Preparation

- Kick-off meeting
- Establishment of communication structure
- Clarification of responsibilities
- Initial coordination with potential Indian partners
- Planning of travel activities on site
- Detailed schedule and resource planning

## WP2 – Baseline Assessment

- On-site meetings with potential Indian stakeholders
- Identification of potential locations
- Site visit/suitability analysis (pre-qualification)
- Country-specific legal and financial regulations, framework
- Identification and definition of baseline conditions (assessment bases, operator models, etc.)

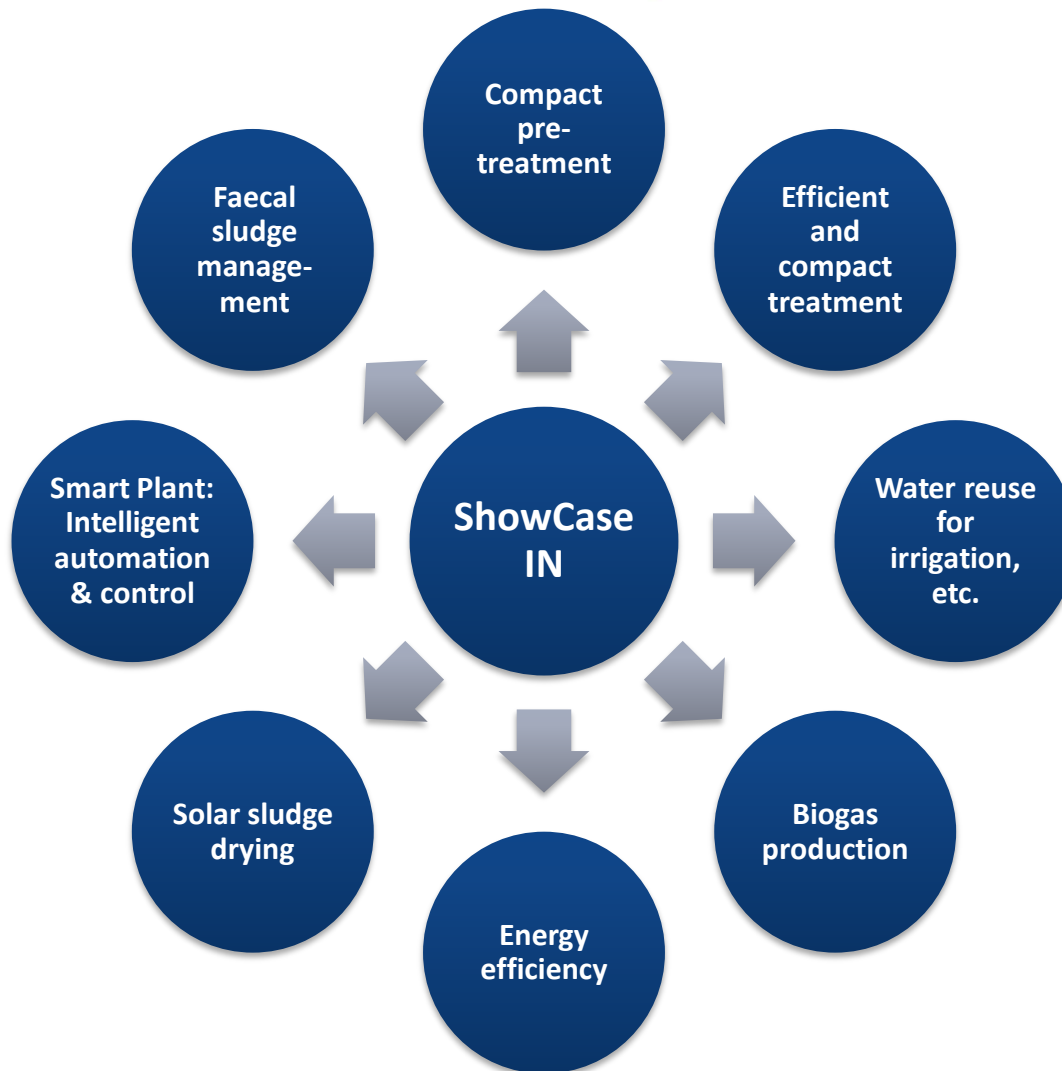
## WP3 - Conceptual design of the ShowCase plant

- Conceptual design of plant components
- Cost estimation and economic feasibility study
- Environmental and social compatibility analysis
- Cost-Benefit analysis, sensitivity analysis
- Supporting financial planning for plant operators
- Development of financing models for possible follow-up projects

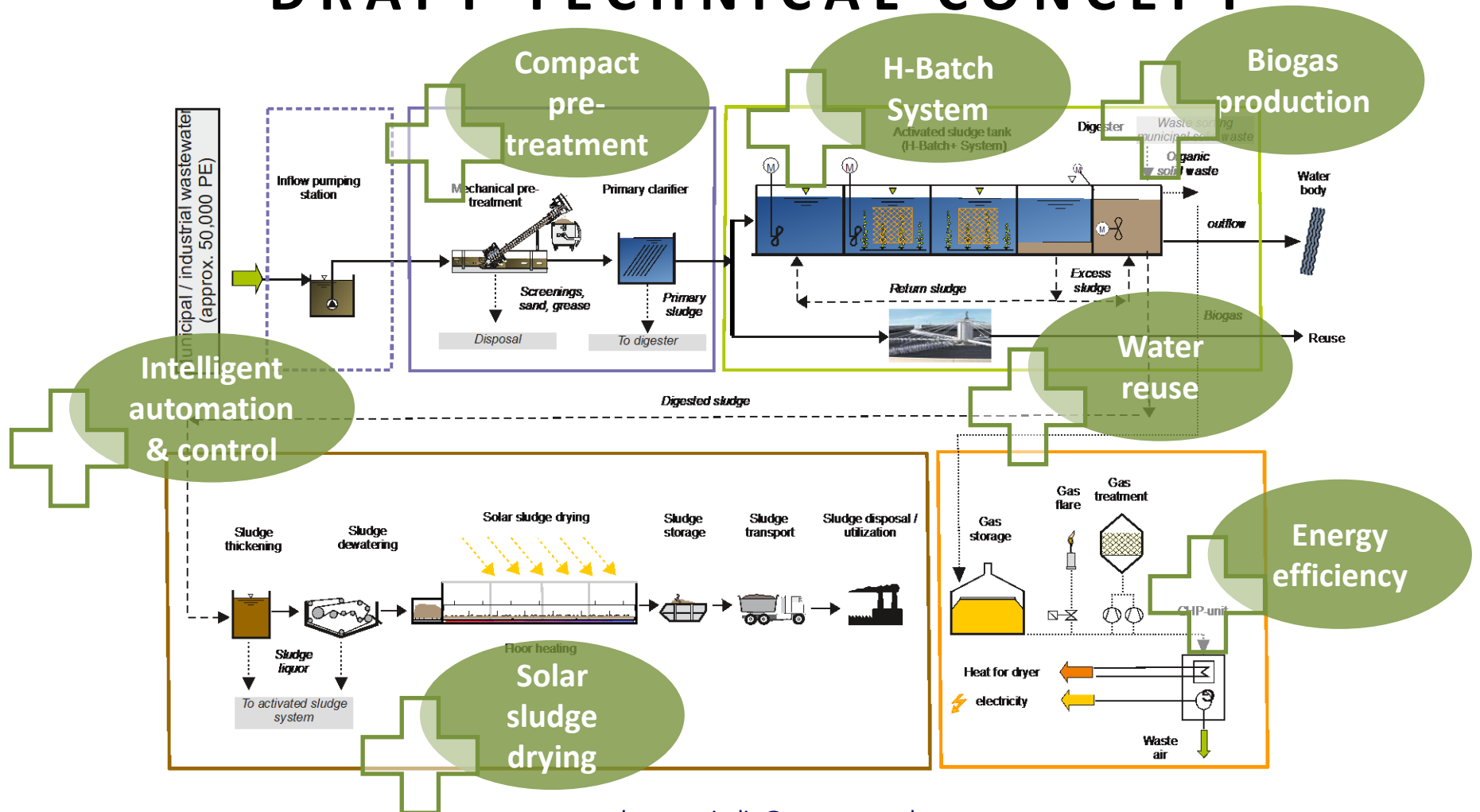
## WP4 – Development of a learning and training concept

- Needs analysis
- Development of different learning and teaching formats
- Conceptual linking to existing training systems
- Brief description of the learning and training center

## WP5 – Overall project management



# DRAFT TECHNICAL CONCEPT



## WE OFFER...

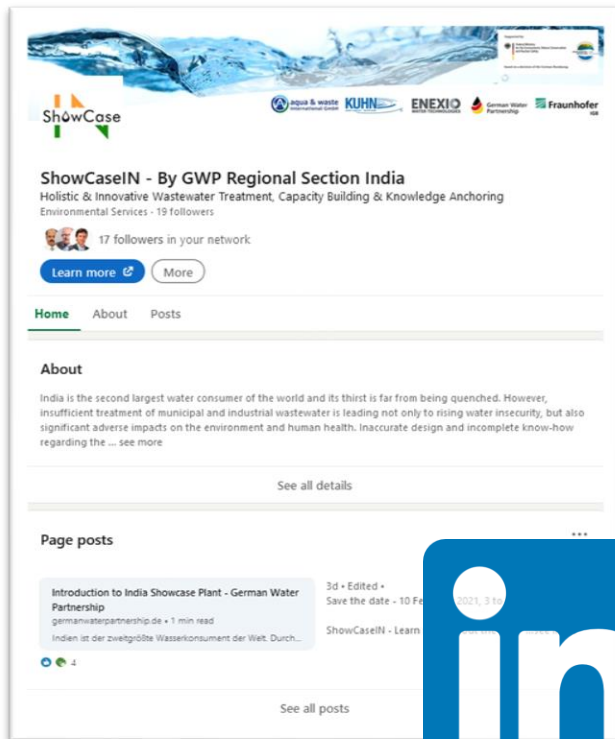
- Individual and holistic concept for an existing or greenfield wastewater treatment plant in India, based on state-of-the-art German best-practice technologies
- Innovative approach towards energy efficiency, water reuse, automation & control, biogas production, sewage sludge treatment & utilization
- Personal technical and project support through on-site visits from German wastewater experts at the treatment plant
- Capacity building and knowledge transfer to enable handover as well as similar future projects.

## WE ARE LOOKING FOR...

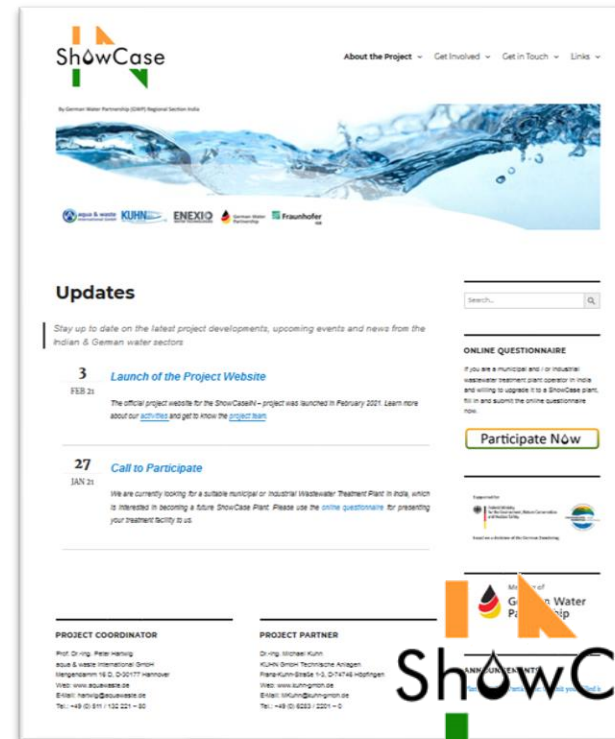
- Existing or to be built municipal wastewater treatment plant (WWTP) with a capacity of approx. 6 MLD
- A (future) WWTP with extensive potential for implementing state-of-the-art technology
- Logistically accessible site with land (approx. 1 acre), electricity and internet availability
- Sewer connections to and from the site
- Willingness for long-term cooperation and trustful partnership
- Willingness to use the future ShowCase WWTP as a learning and training center



# UPDATES



<https://www.linkedin.com/showcase/showcasein>



<https://showcaseindia.aquawaste.de/about-the-project/updates/>