

A short competence sketch:

Bringing innovative ideas into new markets –

Many years of experience in sustainability project development, quality- and resource management, systems analysis, renewable energy and biogas technologies and organic farming practice available at one expert's hand

My expertise comprises the fields of

- Renewable energy technologies, especially energy from biomass (biogas, liquid bio fuels and solid bio fuels), but also a broad knowledge of solar, wind and water energy, and even more innovative energy technologies, comprising e.g. HHO (Browns gas), gasification, liquefaction
- Environmental technologies (e.g. water and waste treatment, water saving, increased energy efficiency and energy saving, energy from waste...)
- Agricultural engineering and farming, especially environmental aspects, biomass for energy production and education in organic farming
- Energy- and resource management, nutrient cycles, energy accounting and -balances
- Integration of energy-, matter- and nutrient cycles (e.g. waste to energy)
- Environmental analysis and balancing (e.g. cradle-to-grave consideration of products and services)
- Integrated analysis of specific project opportunities and –feasibility (technical, economical, environmental, social feasibility)
- Specific environmental project analysis, project development and project management support
- Professional quality- and environmental management methods (ISO 9000 ff and ISO 14000 ff.)
- Fund-raising for int. scientific research projects: Project approach, layout, development, calculation and management
- Know-how management, academic research and teaching and training of biogas practitioners

Many years of practice in these areas of research as well as in practical business as entrepreneur and consultant are building my unique professional background:

- 1990 Professional training in organic farming (for four years in total), certified
- 1995 Diploma as Agronomist, specialised on environmental impacts; Göttingen University
- 2000 PhD-graduation as Agricultural Engineer, specialisation on environmental aspects of agriculture (eco-indicators, environmental management, agricultural emissions and energy accounting in agriculture); Göttingen University, Institute for Agricultural Engineering

- Until end of 2004: Senior researcher, head of research group on biomass energy and renewable energy systems and –technologies analysis; responsible for project management and fund-raising for subject-specific research; several scientific publications on these subjects, national as well as international; Stuttgart University, faculty of energy engineering, IER
- Since 2005 self-employed, businessman, building up several companies:
 - Freelance consultant and engineer on municipal biomass energy concepts and project development, starting in April 2005 (www.biomasse-energie.de)
 - Fermenter-Doktor: Start of commercial biogas consultancy services, foundation of the leading free biogas consultants collaboration in Germany, starting in March 2006
 - Fermenter-Doktor: operational concentration on biogas services, extension and professionalization of biogas business above by launching two more companies, 100% shareholder, owner and CEO of the two companies, at the same time becoming a fulltime biogas consultant, starting in April 2008 (www.fermenter-doktor.com)
 - Avantec Biogas GmbH: specialised engineering company to develop and to produce innovative biogas components, so-called “hydrolysis containers” for biogas plants, shareholder, launched together with three more partners in May 2009 (www.avantec-biogas.de)
- **Selected recent projects:**
 - Market and technical feasibility evaluation in the German biogas sector for a free energy device to improve biogas energy efficiency; March 2010 - Dec. 2010
 - Contributions to market launch of highly innovative water sanitising detergents of the company “ASSTOR”; Oct. 2010 - Dec. 2010 (www.asstor.eu)
 - Collaboration with CORE as a DAU-certified specialist for environmental impacts of agriculture & forestry for sustainability certificates; Oct. 2010 – December 2011 (www.core-cert.org)
 - Worldwide biogas know-how transfer: Support in company start-up and later temporary CTO-mandate in the Swiss “First Biogas International AG - FBI”; summer 2010 - July 2011 (www.fbi-biogas.com)
 - Biogas expertise for market launch and application evaluation of innovative biogas process improvement additives for “Bio-TEC” (micro nutrients and a biocatalyst); March 2011 - May 2011 (www.bio-tec.eu)
 - Practical expertise and biotechnological recommendations in first projects for biogas plant building in Spain (Nova Agrada); March 2011 - July 2011 (www.novaagrada.com)
 - Supporting market introduction of a HHO –System (Browns gas) for increase of energy efficiency 20-40% in motor vehicles and CHP units, since October 2011, ongoing (www.iz-konzept.de)

Out of my daily consultant’s practice, several articles for biogas practitioners were published over the years in professional journals. Thus, I recently was ranked as one of three leading German overall biogas experts by a highly representative biogas company manager.

As a recent strategic adaption to the rapidly developing biogas market my own focus of activities became more and more international. It integrates the expertise gained so far from daily consultancy practice in biogas trouble shooting and in professional teaching of biogas plant operators, heading and developing a biogas experts and consultants company for years and providing solutions for various demands around sustainability projects and aspects.

My very personal contribution to an innovative vision:

My primary challenge I see in contributing all my professional assets and experiences stated above to a sustainable and innovative development, dependent on the local situation being involved. Some aspects I came across so far which may be improved using my expertise:

- Secure drinking water supply, water saving strategies and overall water quality improvement
- Increase of self-supply rate with basic products, from bio-agriculture and industries
- Development / enhancement of intensified but sustainable and feasible local farming / cropping concepts
- Identification of potentials for innovative, sustainable products to be produced in the country
- Increase in renewable energy supply and energy efficiency, improvements in energy supply efficiency, improving the independency from fossil fuel imports
- Sustainable and environmental friendly eco-tourism – competent project checkups before realisation
- Professional sustainability analysis for core processes and products for future governmental decisions and measures
- Development of incentives to improve public environmental and ecologic behaviour
- Improving/closing matter-, waste-, nutrient- and energy cycles

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