

# EnviCare® consultancy for process technology



**Bernhard Mayr, PhD**  
**CEO Graz**

## ■ Founded in 1996

## ■ Locations

- Graz, Austria
- Ljubljana, Slovenia

## ■ Our skills

- Biotechnology
- Process engineering
- Agriculture
- Chemistry
- CAD in 3D



Bernhard Mayr, PhD  
CEO Graz



Rok Mihelic, PhD  
Ljubljana



Samo Hocevar, PhD  
CEO Ljubljana



Erwin Offenbacher, BSc  
Graz

■ **We provide professional expertise for engineering and supervision of**

- advanced waste water treatment
- membrane separation
- biogas technology
- biological waste treatment
- landfill leachate and gas treatment

## ■ Our target markets ....

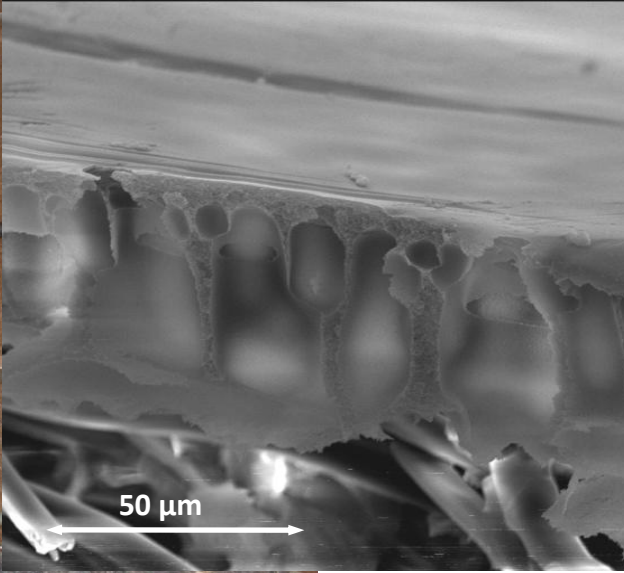
- Austria
- Slovenia
- Croatia
- Hungary
- Serbia
- Bosnia-Herzegovina

## ■ **Our success is based on ...**

- Technological skills
- Experience
- Excellent customer service
- Close co-operation with professional partners from specialised consultancies and universities

# Topics and References

- Communal wastewater treatment:  
MEMJET®: 1<sup>st</sup> Austrian membrane bioreactor in 2002
- Waste water reuse up to drinking water production
- Energy independent waste water treatment: Knittelfeld, 70000 PE



# Renewable energy from Biogas



- Engineering was completed for more than 20 plants
- Projects implemented in Austria, Slovenia and Hungary
- Investment volume: approx. € 55 million in total
- 12 MW electrical power
- 14 MW thermal power

# Development: Our mid term Targets

- Expansion into South-East Europe
  - EnviCare® d.o.o. is already active in Ljubljana/Slovenia
  - So far professional engineering is provided by large European or American consultancies
  - On the other hand international funds financing large infrastructural projects often face significant problems with redemption payments and are less willing to invest
  - And.... there is a tremendous amount of work to do!



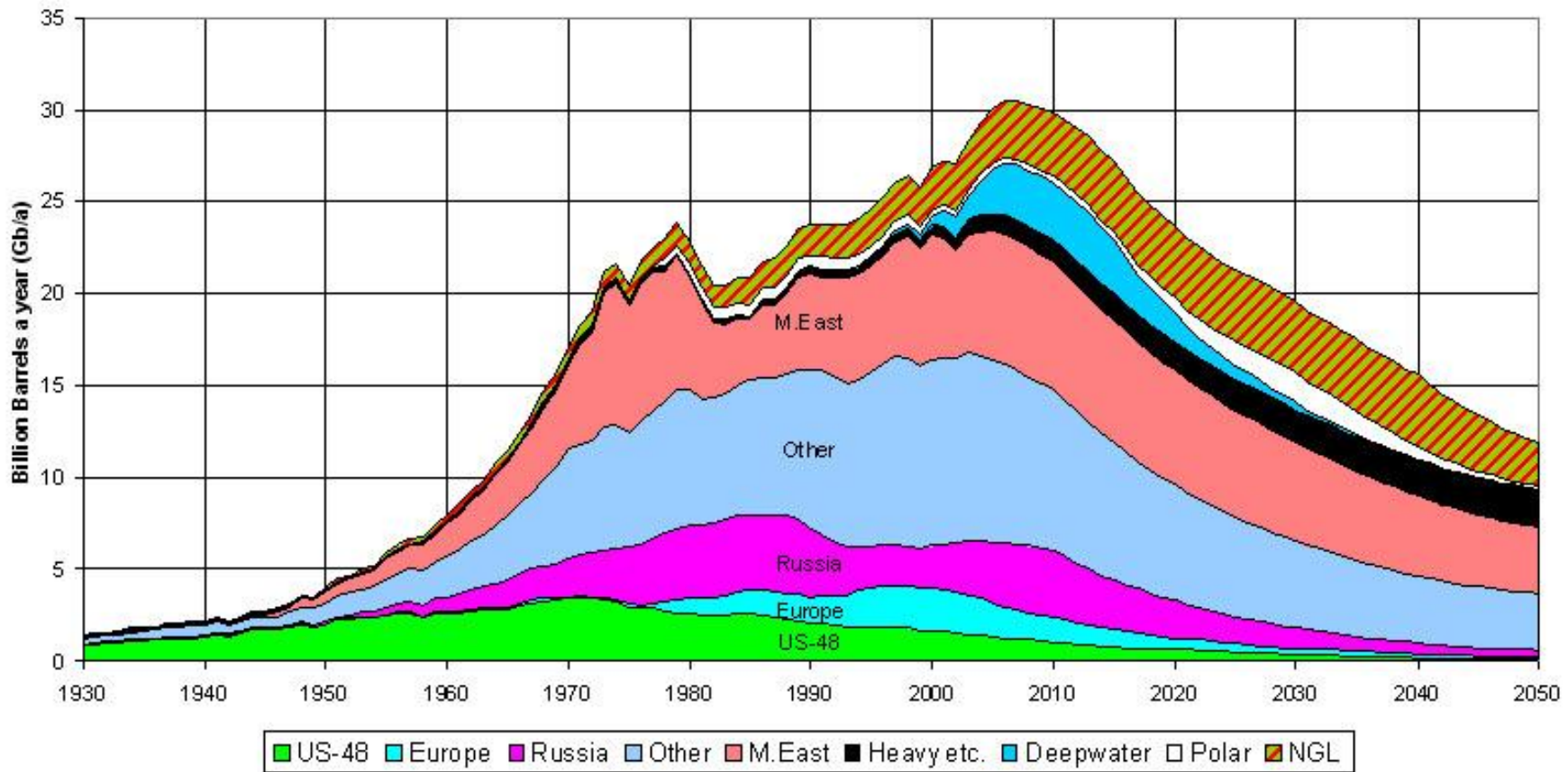


# Development: Our mid term Targets

We intend to increase our engineering activities by employing highly skilled professionals locally and we provide tailor made solutions at an economic rate!

# Research: Our mid term Targets – energy!

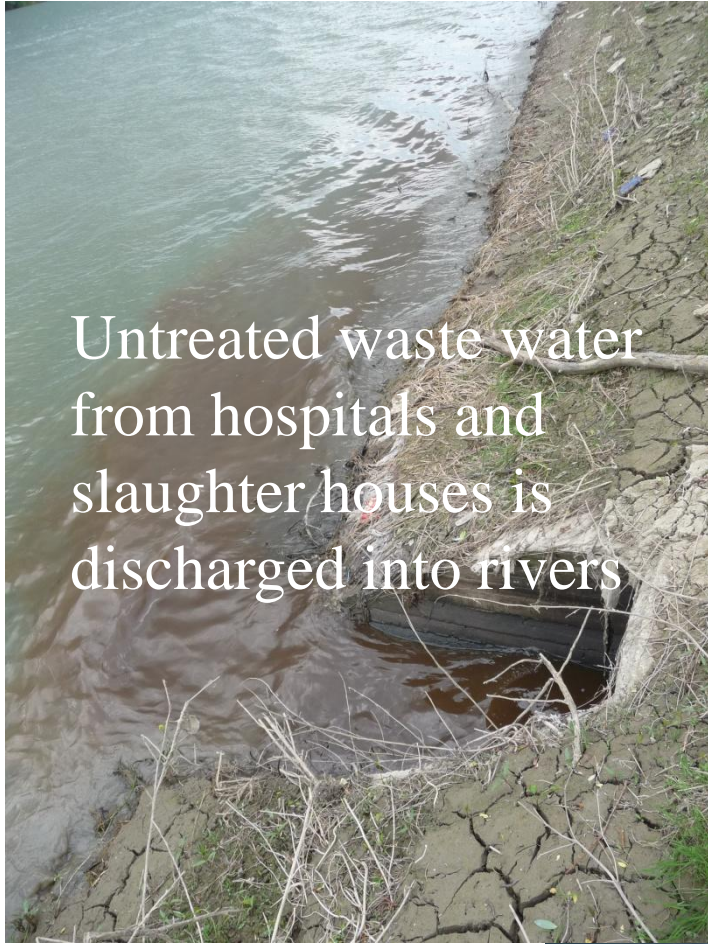
## OIL AND GAS LIQUIDS 2004 Scenario



# Research: Our mid term Targets – energy!

- Energy independent waste water treatment
  - Today waste water treatment is energy consuming and it takes approx. 30 kWh/(PE\*year)
  - We are working on implementing membrane powered anaerobic systems with zero energy consumption and an effluent quality ready for re-use
  - As a by-product we focus on extracting fertilizers such as Nitrogen and Phosphorus for agricultural reuse, especially as Phosphorus is already a depleting resource
- Improvement of anaerobic digestion
  - We are working on inventing a membrane based degassing system for the efficient reduction of by-products which slow down the digestion process
  - Depletion of Ammonia and Carbon-Dioxide will be achieved directly from the fermentation broth by means of membrane permeation
  - Ammonia and Carbon-Dioxide can be recovered and further utilized

# Why should you be interested in EnviCare®?



Untreated waste water from hospitals and slaughter houses is discharged into rivers



...and downstream fishermen catch nice, large fish – and you get them served in the nearby restaurants!

# Thank you for your

# Attention!

**For more information:**

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