International Forum
Responsible investments in the CIS region

Environmental Projects in the CIS Region – Best Practices from Bavaria

Trägerverein Umwelttechnologie-Cluster Bayern e.V.
Alfred Mayr, Managing Director

Frankfurt a. Main, December 17th, 2019

UmweltCluster Bayern

About us:

- Excellence in environmental technologies since 2006
- Objectives:
  - development of sustainable solutions for environmental challenges regionally and globally
  - fostering of innovation and competitiveness
- > 230 members:
  - 150 company members, esp. SMEs
  - 80 members from the scientific and public sector
- Supported by the Bavarian Ministry for Economics and the Bavarian Chambers of Commerce and Industry

SILVER Cluster Management Excellence

2x Rewarded with the Silver Label of the European Cluster Excellence Initiative (ECEI)

UMWELTCLUSTER BAYERN
AN INNOVATIVE NETWORK

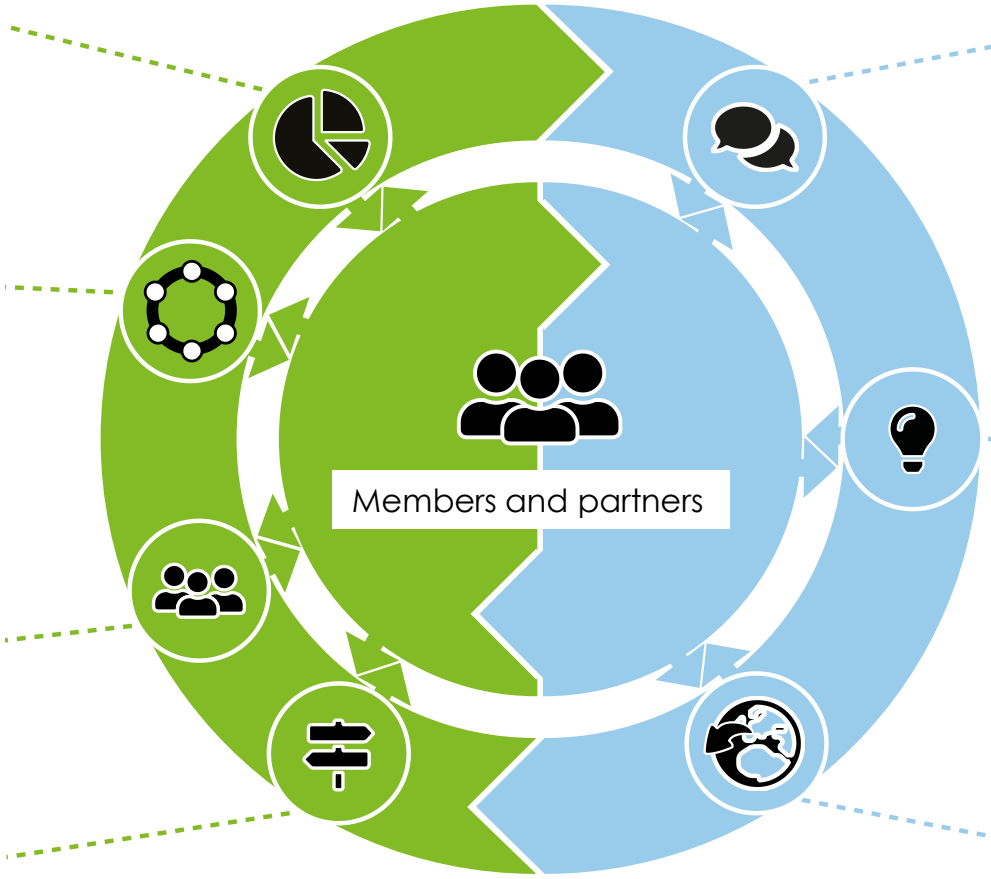
UmweltCluster Bayern

All cleantech sectors

The entire value chain

Expert knowledge from and for companies, research facilities and public bodies

Contacts nationally and globally



Forum

Innovation platform

Launchpad for internationalization

Rooted in Bavaria – internationally active:

Selected Projects of UCB members in the CIS Region

UmweltCluster Bayern

WATER TREATMENT

UmweltCluster Bayern

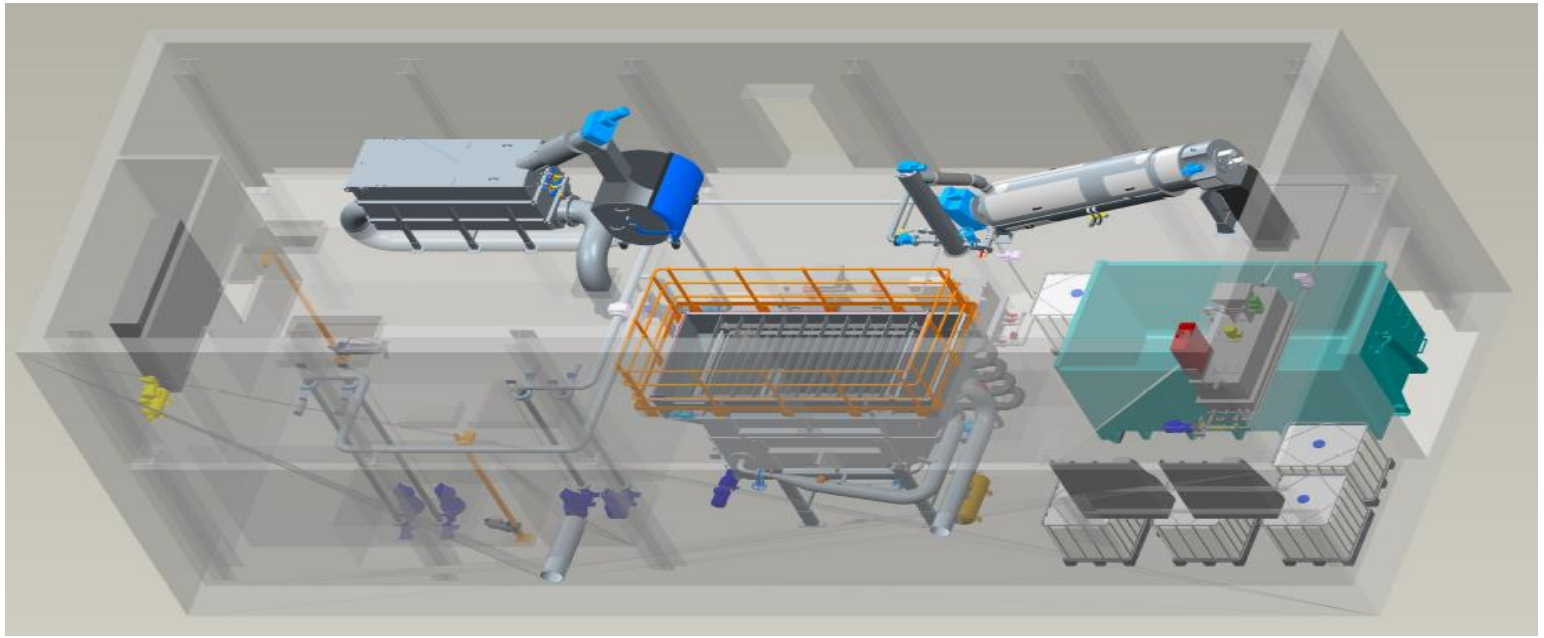
Case study Sveza Izhora / Russia

Company: Sveza Izhora
Production: Plywood

Waste water:

Volume:	max. 1.600 m³/day
COD:	4.500 – 5.000 mg/l
BOD_5	2.300 – 2.500 mg/l
Suspended solids:	1.900 – 2.100 mg/l
pH:	4 – 5
Temperature:	40 – 50 °C

Case study Sveza Izhora / Russia



HUBER Solution for waste water treatment:

Pre-treatment with
HUBER Screen ROTAMAT® RPPS

HUBER Dissolved Air Flotation HDF

HUBER Screw Press Q-PRESS®
for sludge dewatering

Waste water before and after treatment

Reduction rates

Suspend Solids:	99 %
COD and BOD_5:	30 %
COD and BOD_5:	30 %
Phosphorus:	96 %
Iron:	99 %
Formaldehyde:	25 %

WASTE MANAGEMENT

UmweltCluster Bayern

Moscow #2, Russia

CNIM Innovate and Act

CNIM: core technology (furnace, boiler, flue gas cleaning)

MARTIN: delivery of reciprocating grate

- **3 lines**
- **Throughput: 3 x 8,3 t/h**
- **Thermal output: 3 x 14,5 MW**
- **In operation since 1998 (L1&L2) / 2003 (L3)**

Baku, Azerbaijan

CNIM: General contractor, operation for 20 years

MARTIN: delivery of reciprocating grate

- **2 Lines**
- **Throughput: 2 x 33,5 t/h**
- **Thermal output: 2 x 78 MW**
- **In operation since 2012**

Baku, Azerbaijan:
World´s largest recycling centre for synthetic drilling fluids by econ industries

Zero industrial waste …!

econ industries services GmbH
Schiffbauerweg 1
82319 Starnberg
Germany
+49 8151 446377-22
a.castilla@econindustries.com
www.econindustries.com

- 2 VacuDry® 12,000 x 2 plants
- Throughput capacity: 7 - 11 tons per hour
- 10 months delivery time incl. customisation for earthquake resistance

Baku, Azerbaijan:
World´s largest recycling centre for synthetic drilling fluids by econ industries

Requirements

- Treatment of up to 80,000 tons drill cuttings per year
- Recovery of the synthetic drilling fluids in a product quality identical to virgin product, for direct reuse at the drilling rig
- Most environmentally friendly technology; lowest CO_2 footprint
- Highest technical availability with two plants operating independently despite installation in an harsh environment in Baku, Azerbaijan




Economic details

- 16,000 t / year synthetic drilling fluids recovered
- 12,000,000 € / year savings; based on drilling fluid price of 0.75 € / litre (drilling fluid: Escaid 110)
- 2 - 3 operators per shift per VacuDry® plant
- > 15 years expected equipment life time
- Lowest possible energy consumption and emissions

ENVIRONMENTAL MANAGEMENT

UmweltCluster Bayern

EMAS - Premium environmental management

EMAS Eco-Management System of the EU

- Perfectly suited to demonstrate an organization’s efforts in sustainable development
- Supports organizations to measure, evaluate, report and improve their environmental performance
- Suitable for all kind of companies (from hotel to industrial park operator) and public organizations
- Incorporates management and employees as well as local population or political stakeholders
- High acceptance because of validation by EU auditors and certification according to EU standards
- Offers excellent promotion by use of EMAS Logo

Performance – Credibility – Transparency

Example - EMAS/OHSAS Introduction outside the EU

introduced EMAS to an industrial park in Belorussia

Supported by:

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

based on a decision of the German Bundestag

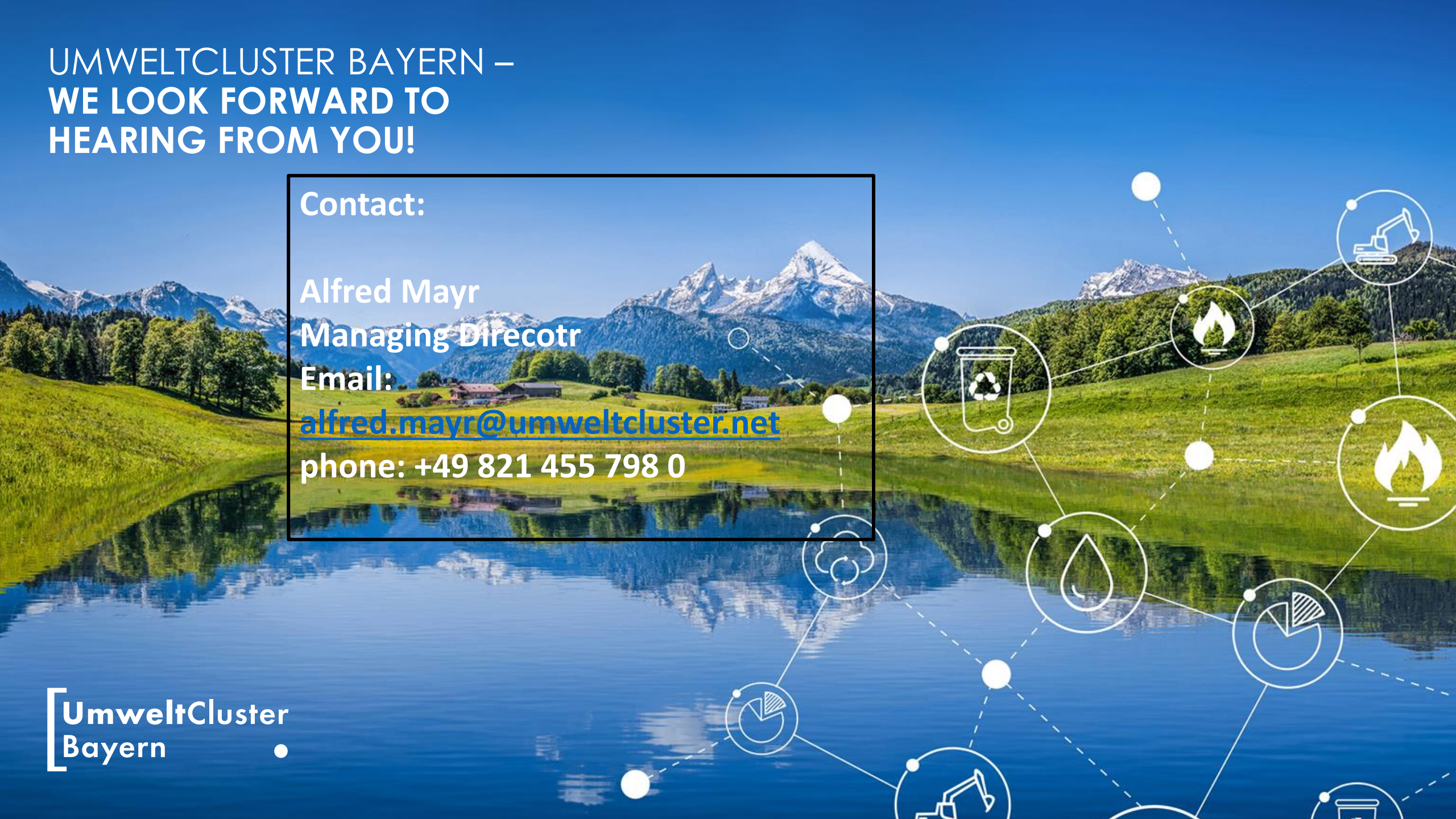
Goals of the project were:

- Raise the attractivity for international investors by demonstrating the environmental sustainability of the industrial park
- Get the EMAS Logo and achieve inclusion in the list of registered sites to further improve promotion
- Demonstrate there is no contradiction between economy and ecology
- Use this pilot project for further roll out at all companies on site and in general in Belorussia

UMWELTCLUSTER BAYERN –
WE LOOK FORWARD TO HEARING FROM YOU!

Contact:

Alfred Mayr
Managing Direcotr
Email:
alfred.mayr@umweltcluster.net
phone: +49 821 455 798 0



UmweltCluster Bayern