FINNISH WASTE MANAGEMENT KNOW-HOW & TECHNOLOGIES

A Waste to Energy: An Approach for Solution in Gujarat, India

SOLUTIONS = Humans + Machines

Vimalkumar A. Vaghani
Founder & President of VAGHANI Groups
Tel.: +358 40 676 6113
Email: vimalkumar.vaghani@vaghanigroups.com
Website: www.vaghanigroups.com

Matti Pettay
Chairman of EVAK Ry
Tel.: +358 40 715 0764
Email: matti.pettay@evak.fi
Website: www.evak.fi
Honkajoki Groups

Refines its customers organic by-products according to agro-ecological principles.

Honkajoki Oy, founded 1967
- Atria Oyj
- HK Scan

Findest Protein Oy, founded 1995
- Honkajoki Oy (50,3%)
- Atria Oyj
- Saarioinen
- SMJ

Category 1
By-products 29 858 t
- Specially defined risk material
- Bovines died on farms
- Certain animal diseases, zoonosis

Category 2
By-products 41 913 t
- Digestive tract content
- Parts that were rejected in inspection
- Pigs and Poultry that have died on farms

Category 3
By-products 20 758 t
- Parts that are not used for human consumption (mainly bones and internal organs)
- Hides, Skins, Bristles, Feathers, Hair, Blood, Former Food Stuff

Incinerated as a Waste Energy

Fertilizers Fur animal feeds Energy

Pet food Fur animal feed Fish feed Energy

Honkajoki Oy
www.honkajokioy.fi
<table>
<thead>
<tr>
<th>Envor Group</th>
<th>Envor Biotech</th>
<th>Envor Recycling</th>
<th>Envor Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Waste management services&lt;br&gt;• Property maintenance&lt;br&gt;• Suction truck services&lt;br&gt;• Truck wash&lt;br&gt;• Logistics services</td>
<td>• Biogas plant&lt;br&gt;• Composting plant</td>
<td>• Glass&lt;br&gt;• Metal&lt;br&gt;• Plastic</td>
<td>• Cardboard&lt;br&gt;• Paper&lt;br&gt;• Confidential material</td>
</tr>
</tbody>
</table>
**Fenno Water Ltd Oy** (FW) is a multinational ownership company founded in 2006 that is focused in water supply and sewerage engineering for Industrial and Municipal projects.

FW’s area of operations cover drinking-, and waste water treatment plant projects in form of turnkey-, partial process-, and mechanical equipment delivery.

FW’s employees have long term experience in this field of work and in the export trade business.

- Screening units
- Compact screening/sand
- Surface sludge separating units
- Sand and surface sludge separation units
- Conveyors and conveying systems
- Sludge de-watering units
- Chemical dosing
- Sludge scrapers
- Gravity sludge thickening & storage silos
- Flotation (DAF) units
- Mixers
- Biological treatment
- Chemical processes
- Membrane technology
DORANOVA
WWW.DORANOVA.FI

CONTAMINATED SITES
Doranova has over 15 years of history in soil and groundwater remediation. Remediation solutions are based on novel innovative in situ and on-site methods, which allow us to remediate contaminated sites without disturbing the existing site usage and allowing operators to continue at site. Our long experience in versatile remediation projects guarantees our clients with a successful end result.

WATER & WASTE
Our solutions for water and waste management create multiple opportunities for enhancing material flow management in industries, water and wastewater plants, as well as on landfills. Our solutions are based on our long experience in water and gas filter design and manufacture. In addition our specialist know-how on membrane technologies creates new enhanced solutions for our clients.

RENEWABLE ENERGY
Our efficient solutions for utilizing and generating renewable energies provide opportunities for independent power producers, farmers and households in transforming biomass or solarheat to energy sources. We provide our clientele according to their needs with full product life-cycle services from idea to turn-key solutions, including after sales service.
Fortum was founded in 1998. The plan was to create a new energy group by combining the businesses of state owned Imatran Voima (IVO) and the listed company Neste Oyj.

- Fortum generate, distribute and sell electricity and heat, and offer related expert services
National specialised institute for adult further education and training

Development organization
   Developing projects, short courses, consultation

Funding:
   50 % Ministry of Education
   Customer invoicing
   Project funding

2700 students in 2013
Permanent staff of 32, network of specialists
Training courses arranged all over Finland (and also abroad)

Fields of education and training

• WASTE MANAGEMENT AND RECYCLING
• ENVIRONMENTAL LOGISTICS
• SUSTAINABLE DEVELOPMENT AND MANAGEMENT
• ENERGY EFFICIENCY
• WATER SUPPLY AND SEWERAGE
FWMC vision: VMSS GREEN-Agro ecological park
There are 20 companies located in the area with over 200 professionals.

BrightGreen FORSSA region is known about the Envi Grow Park:
Eco-industrial park of material recycling, bio-economy and renewable energy, located in the Forssa Envitech area!

A closed loop system, where:
- the waste of one is raw-material to another!
Opportunities for Co-Operation in the Environmental Sector

- Between Finland Waste Management Consortium (FWMC) & Vadodara Mahanagar Seva Sadan (VMSS)

- FWMC Partners/Companies include Honkajoki Oy, Envor Group Oy, FennoWater Ltd Oy, Doranova Oy, Goodwell InfraDev Oy, Akkuser Oy, Biolan Oy, Novosan Oy, Eltele Group, Arbonaut Oy, Town Forssa / FSKK, AVNI Environmental Solution Pvt. Ltd.

- With a goal to develop “Waste Management Industrial Park (WMIP)” in Gujarat, mutual co-operation for Rendering Plant & Sister City between VMSS, India and FWMC, Finland

- Field/Study visit of Indian authorities, private stakeholders & Members of Consortium to identify on how to operate in Gujarat State (feasability study, project etc.)

- Training for Finnish companies and organizing placement, workshop & seminar
Proposal: Vadodara Mahanagar Seva Sadan (VMSS) Municipality

- Proposal for Rendering Plant
  - VMSS(Gujarat) and Finnish parties shall establish a planning team in 2014
  - Feasibility study in 2015
    - Waste Management Industrial Park (WMIP) in Vadodara, Gujarat; total solution for waste cycle
    - Stakeholders, timetable, financing and possible grants of each state
    - From raw material to end products etc.
  - Discussion and Decision making of Project Implementation in 2015-16
  - Feasibility study costs sharing shall be agreed upon exclusively between FWMC & VMSS

- Proposal public/private partnership (PPP) co-operation
  - FWMC and VMSS form a planning team in 2014
  - Exchange of know-how of local conditions, experiences etc.
  - Formation of Sister cities between Municipalities of Finland & Gujarat in 2015
Thank You