



## Concept “Waste to Energy”

Waste to Energy

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# 01

## Introduction

## What are **UniOne**'s core competences ?

**UniOne**'s core competence is to work like an interface between economy and technology, bringing ideas into business

- ◆ Engineering
- ◆ Development of individual, sustainable concepts from A to Z
- ◆ Further development of innovative technical applications
- ◆ Consulting
- ◆ Project management
- ◆ Analyses and evaluation (water, air, ground)
- ◆ Interdisciplinary network management

## What does **UniOne** Group do ?

### **UniOne** Group focuses on ...

- ◆ Innovation management
- ◆ „Waste to Energy“ concept
- ◆ Stand-alone energy systems
- ◆ Prevention of garbage
- ◆ Recovery and recycling of usually lost valuable substances
- ◆ Conception of landfill and management
- ◆ Innovative filter systems
- ◆ ...and „modular conversion“ of the actual concept as individual components...

02

## Concept „Waste to Energy“ ( W2E )

# UniOne overview

MODULE 1  
MODULE 2  
MODULE 3  
MODULE 4  
MODULE 5

## BASICS



IDEA



ANALYSIS



APPROACH



CONCEPT



IMPLEMENTATION

## COLLECTING



HOUSEHOLDS



INDUSTRY  
AGRICULTURE



EVENTS



WASTE  
INDUSTRY



OTHER

## SEPARATION RECOVERY



METALS



GLASS



PAPER



ORGANIC  
STUFF



PETE  
PLASTICS



REST +  
SPECIAL MIX

## UTILISATION RECYCLABLES ENERGY PRODUCTION



SALE



RECYCLING



COMPOSTING



THERMAL  
TREATMENT



PYROLYSIS



LANDFILL

## ADDITIONAL CONCEPTS



AUTARK  
ENERGY  
CONCEPTS



RENEWABLE  
ENERGY



WATER  
TREATMENT



SMALL  
+  
MOBILE  
SOLUTIONS



STORAGE  
OF  
ENERGY

# UniOne concept W2E

## Module 1 : Basics

- ◆ Open and unbiased exchange of ideas with customers
- ◆ Valid fieldwork at the customer with analysis...
  - of the actual circumstances ...and...
  - the parameters (such as laws, restrictions, possibilities for grants, studies, etc.)
- ◆ Concept development, project planning and transparent realization of the individualized concept
- ◆ Engineering and other problem solving services
- ◆ Implementation of overlapping innovative technologies and solutions
- ◆ Setup of new structures and processings on customer side
- ◆ Development of organisation and education and training



## **UniOne concept W2E**

### **Module 1 : Basics**

- ◆ Integration of project partners, departments and service companies on customer side
- ◆ Reduction of interface problems through sensitive, intercultural guidance in projects
- ◆ Project-related surplus values and sustainable know how transfer
- ◆ Guidance in communication and documentation
- ◆ Establishment of and/ or involvement in joint operating companies
- ◆ Supporting network and project partner

## **UniOne concept W2E**

### **Module 2 : Collection of waste**

- ◆ Individual approach according to customer requirements
- ◆ Setup on / with established collecting systems
- ◆ Optimization of an existing collecting process and the whole material flows
- ◆ Implementation of compensation und inspection systems
- ◆ Guidance, acquisition and setup of necessary collecting infrastructure
- ◆ Education and training of staff
- ◆ Integration of project partners, departments and service companies on customer side
- ◆ Documentation of the project
- ◆ Attending communication and public relations

## UniOne concept W2E

### Module 3 : Separation and recovery of valuable substances

- ◆ Separation into different fractions
  - metal
  - glass
  - paper
  - plastics
  - organic substances
  - rest and special mixtures
  - wood, stones, construction waste
- ◆ Modular in different sorting steps and mainly automatized progress
- ◆ Adapted for...
  - ...the individual waste-mix...
  - ...the arising amount of waste...
  - ...maximal value and energy production
- ◆ Compliance with all legislation  
(industrial law and health requirements)

## UniOne concept W2E

### Module 4 : Utilisation of recyclable fraction

- ◆ Sale, such as ...
  - separated single substance or substitute fuel
- ◆ Recycling and further processing, such as ...
  - metals
  - plastics (pellets)
  - scrap paper
- ◆ Composting, such as ...
  - bio fertilizer
  - bio-gas

## UniOne concept W2E

### Module 4 : Utilisation of recyclable fraction

- ◆ Thermal treatment for energy production, such as pyrolysis and classical waste incineration to ...
  - electricity
  - heat / cold
  - bio-gas / gas
  - bio-oil / oil
  - bio-diesel / diesel
- ◆ Landfilling
  - ...inclusive landfill management

## UniOne concept W2E

### Module 4 : Examples W2E



**biogas**



**biogas motor**



**waste incineration**



**pyrolysis**



**composting**



**expired food to  
energy**

## **UniOne concept W2E**

### **Module 5 : Additional concepts are ...**

- ◆ Modular technology for energy and power stations
- ◆ Autarkic energy concepts
- ◆ Renewable energies
- ◆ Small and mobile solutions
- ◆ Storage of energy
- ◆ Concepts for water treatment

## UniOne concept W2E

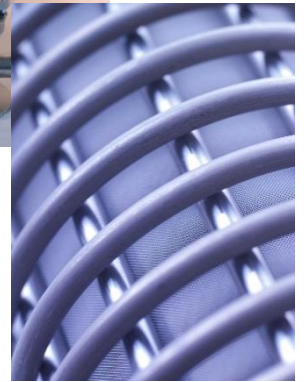
**UniOne Group** – partners for building solutions like ...





## UniOne concept W2E

**UniOne Group** – partners for building solutions like ...



# 03

## Your surplus values

## What are the **UniOne** added values ?

### **UniOne** Group offers for your projects...

- ◆ One**Stop**-Strategy ...
  - thereby **one** central contact, who ...
  - ... coordinates competences in your project.
- ◆ field-tested technical understanding
- ◆ customer and solution oriented acting
- ◆ overlapping knowledge in different subjects
- ◆ all the unique features in high quality of our technical product partners (Made in Germany)
- ◆ synergistic project experience
- ◆ interdisciplinary well-practiced team
- ◆ transparent transfer of know how
- ◆ bringing together of people and companies on international basis

***“Coming together is the beginning.  
Keeping together is progress.  
Working together is success.”***

***Henry Ford (1863 – 1947)***

**UniOne Group\***

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