



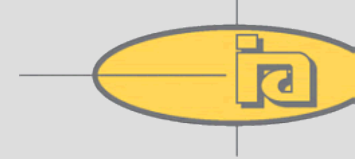
Consulting



Engineering



Communication



The 2016 WTERT Conference

-

Progress in waste management in Germany and Eastern Europe

COLUMBIA UNIVERSITY, NEW YORK CITY, OCTOBER 6 & 7, 2016

Dipl.-Ing. (TU) Werner P. Bauer





W_tERT
Waste to Energy Research
and Technology Council-Germany

Waste management progress in Germany and Eastern Europe

As of 1 June 2005, landfilling of domestic refuse and commercial wastes similar to domestic refuse without pretreatment is prohibited in Germany.

The German government aims to achieve almost complete high-quality recovery, at least of municipal waste, by 2020.

We have lots of Waste-to-energy and recycling plants.

Is everything ok?

Germany:

Product responsibility is at the heart of waste management policy in Germany. It puts the idea into practice that waste avoidance is best achieved by holding the generator of waste responsible.

This way, producers and distributors **must** design their products in such a way as to reduce waste occurrence.



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Waste management progress in Germany and Eastern Europe

Some vote for higher recycling rates, others hope for a stronger policy against producers but we still do not have any idea how to reduce waste.

Waste management in Germany is at least a great business:

70 Billion Euro turnover per year



Germany:

So every Zero Waste Initiative with enough power is in opposite to all these workers, earning their money by carrying waste around and hoping that at the end of day everything is recycled.

This means we need incineration plants and we still need landfills as a trough for the toxic substances in waste.

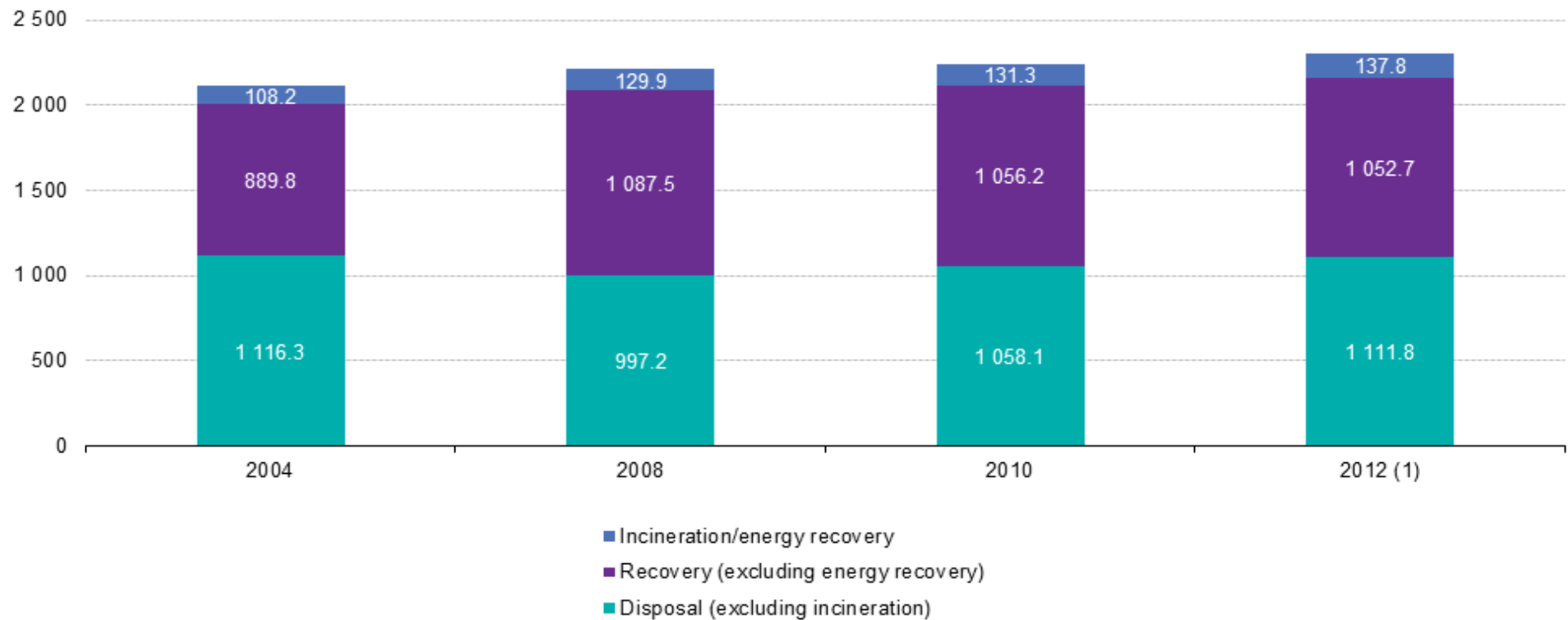


Waste management progress in Germany and Eastern Europe

Eastern Europe:

Progress?

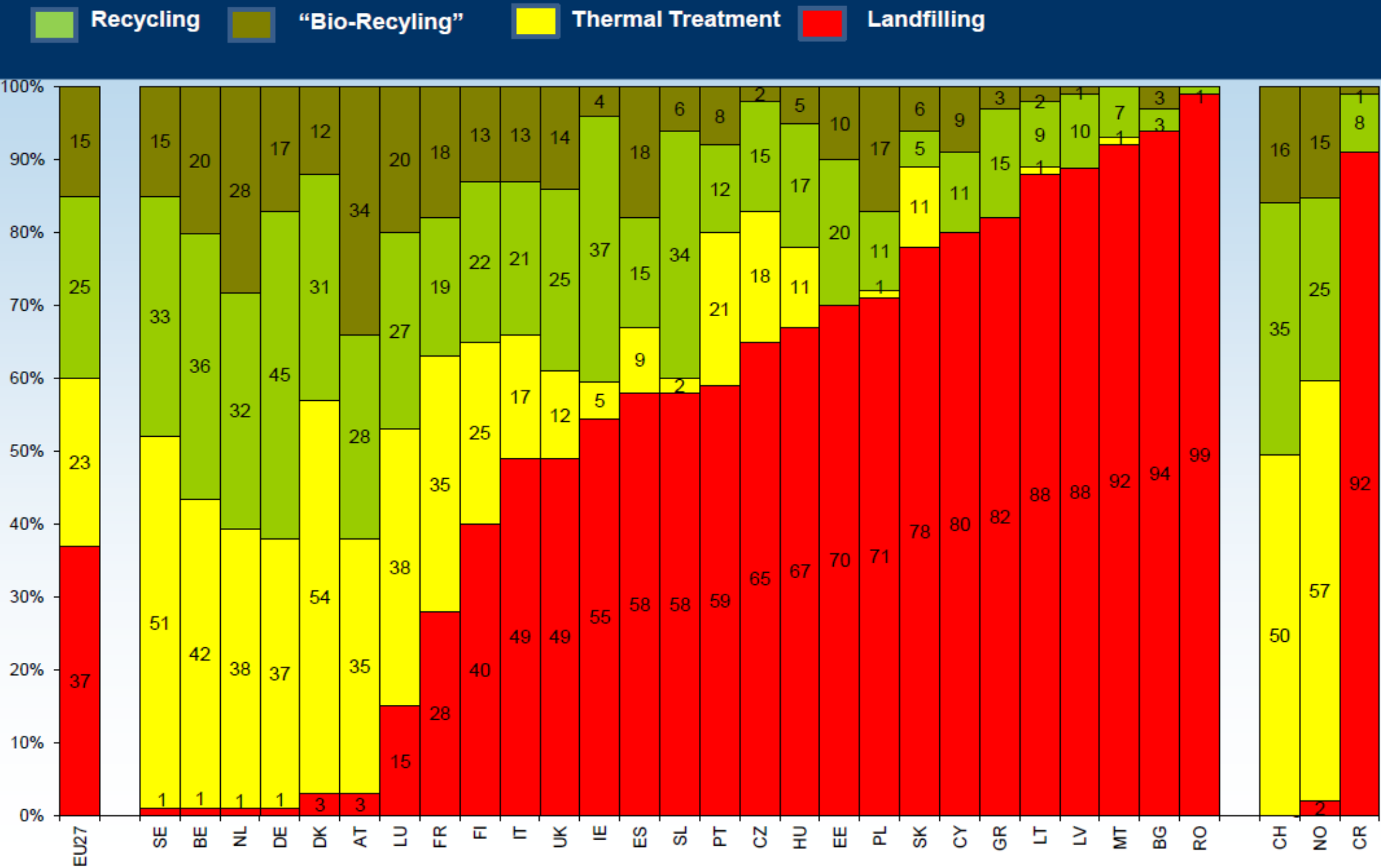
...



Treatment of MSW across Europe in 2011

Source: EUROSTAT

Graph created by CEWEP





Consulting



Engineering



Communication



Engineering – Research work and design



**Composting Plant
for biowaste –
Design**



**Fermentation
Plant - Project
control**



**Landfill –
Design, Research
Work**



**Civic Amenity
Sites - Design**

All projects by:





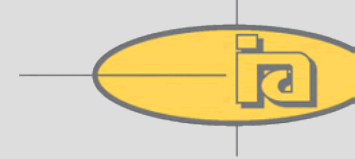
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Bundesministerium
für Wirtschaft
und Energie



Technology transfer project on behalf of: Federal Ministry for Economic Affairs and Energy

Waste Hierarchy:

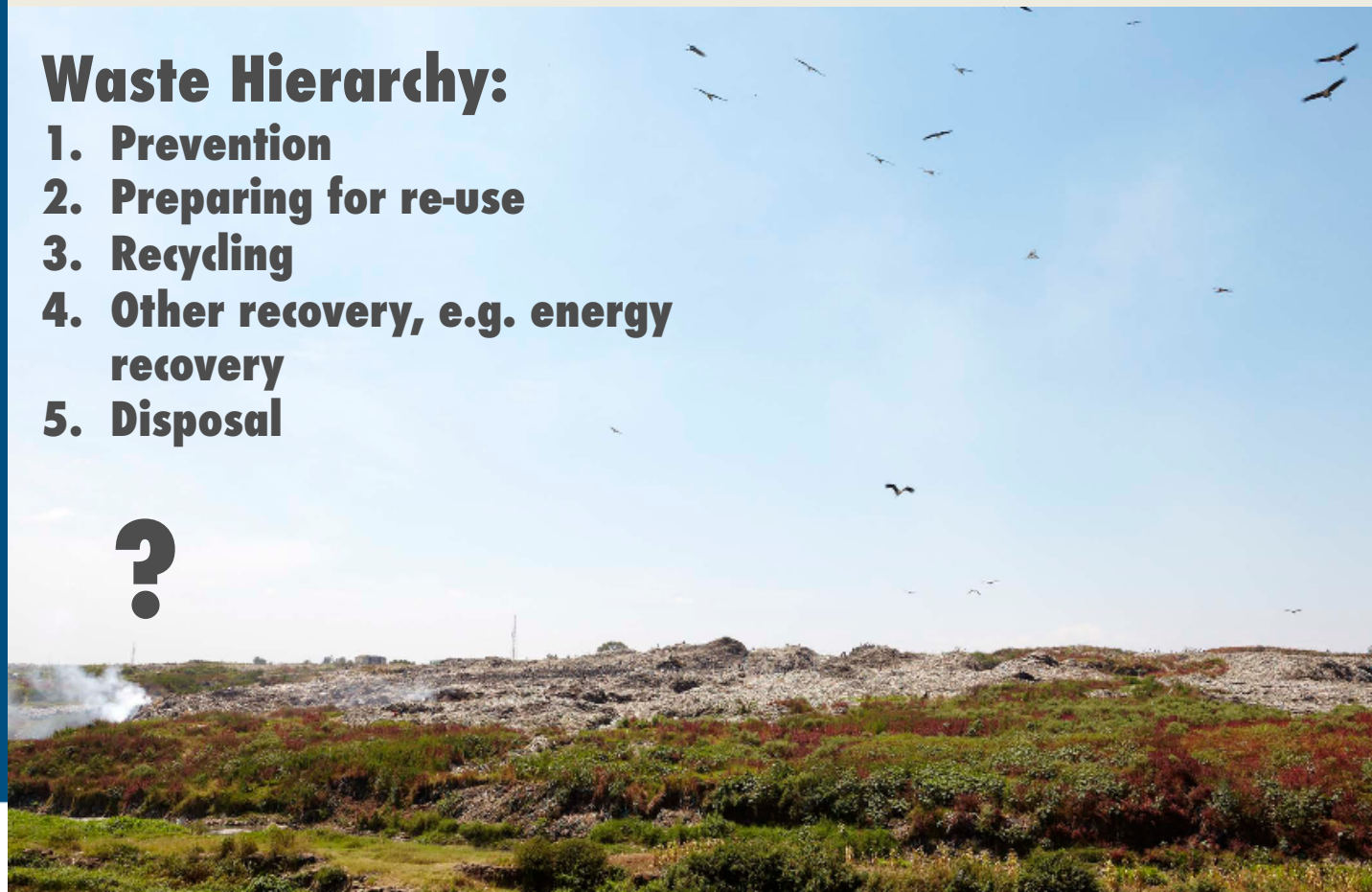
1. Prevention
2. Preparing for re-use
3. Recycling
4. Other recovery, e.g. energy recovery
5. Disposal



Sustainable Waste Management in Kroatien

Forum mit Leistungspräsentation in Zagreb
26. bis 28. Oktober 2016

BMW-Markterschließungsprogramm für KMU 2016





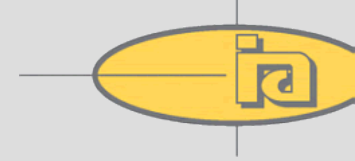
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and the possibility
of prevention



... the benefit of fermentation

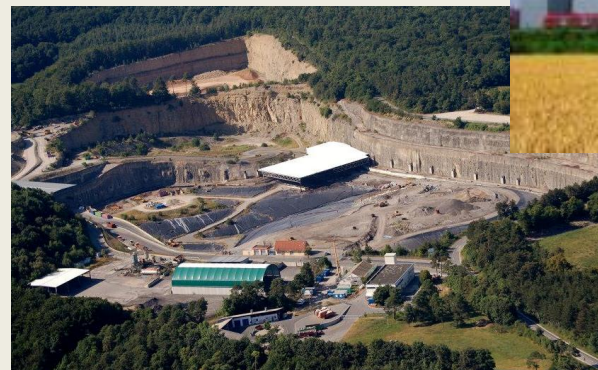


... the need for incineration

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We promote for a good
landfill operation



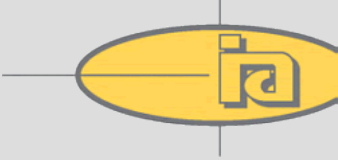
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Best practice: Waste prevention in Munich „No throw away dishes at the Oktoberfest“
Visitors/Year: about 6 Million

Waste before 1991: 2 kg/v = total amount: 12.000 tons

Waste after prevention act in Munich: 0,2 kg/v = total amount: 1.200 tons



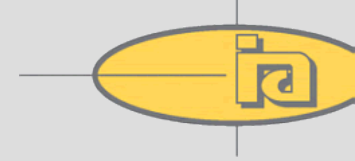
Consulting



Engineering



Communication



Bundesministerium
für Wirtschaft
und Energie



BELIEBTE PRODUKTE

 **A**

699.-

inkl. Mwst. zzgl. Versand € 39,90

SAMSUNG UE50KU6079, 125 c...

 **A**

449.-

inkl. Mwst. zzgl. Versand € 39,90

SAMSUNG UE40K5589, 101 cm...

 **A+**

259.-

inkl. Mwst. zzgl. Versand € 4,99

JAY-TECH GENESIS 4, 101.6 cm (...)

 **A+**

219.-

inkl. Mwst. zzgl. Versand € 4,99

SAMSUNG UE32J4000AW, 80 c...

Sustainable Waste Management in Kroatien

Forum mit Leistungspräsentation in Zagreb
26. bis 28. Oktober 2016

BMWi-Markterschließungsprogramm für KMU 2016

Should we tell them, to reduce consuming...?

In order of the
Federal Ministry for Economic Affairs ... ?





W_tERT
Waste to Energy Research
and Technology Council - Germany

Keypoints for the Development of the
„W_tERT - Decision Support System“

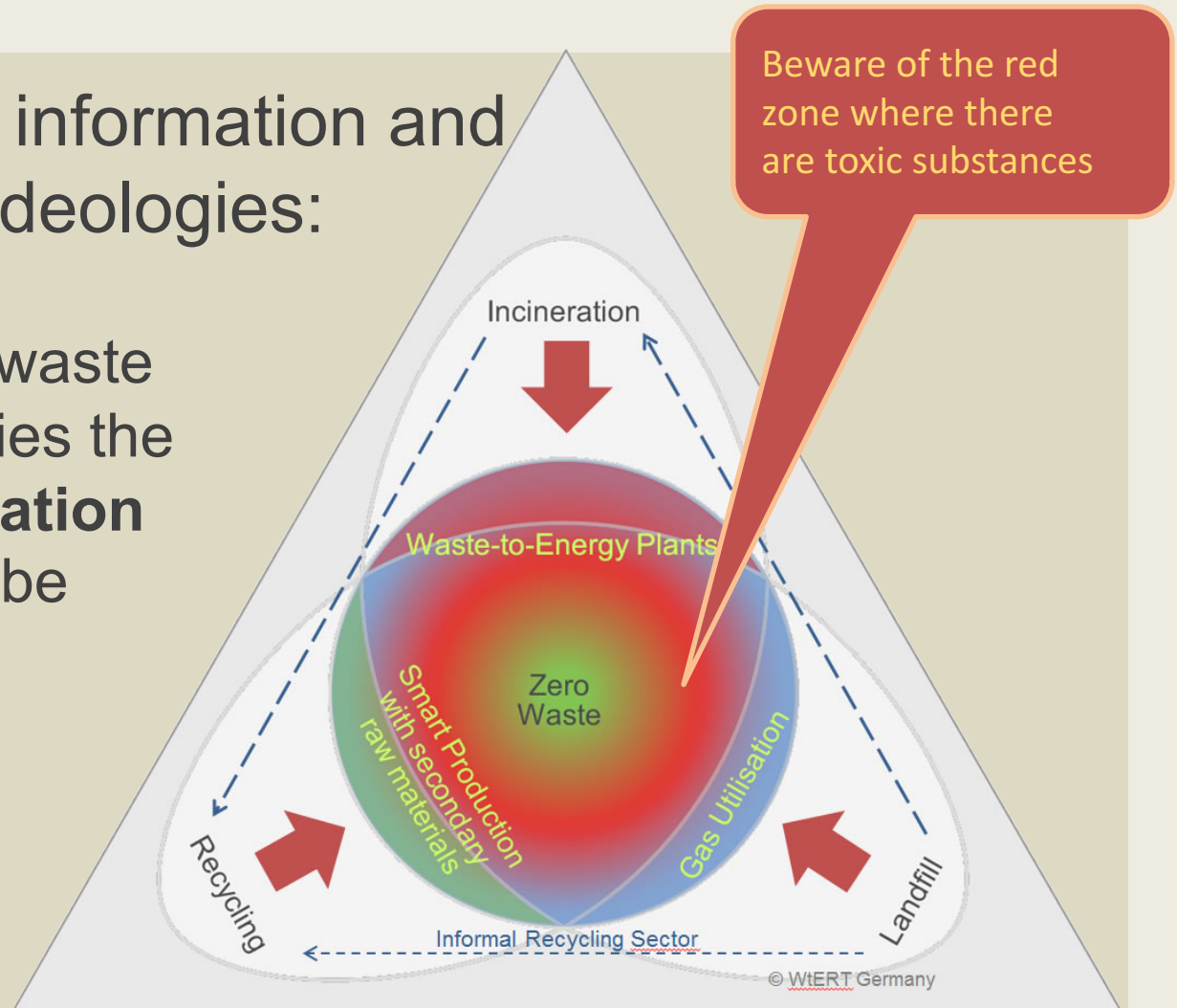
What is our responsibility – our task?

I guess the WtERT family is predestinated to increase awareness of waste problems and to harmonize the various possibilities of technical solutions – and this not only in Eastern Europe!



Stakeholders need information and knowledge free of ideologies:

Unlike other common waste management hierarchies the areas **landfill**, **incineration** and **recycling** should be presented equally and value free.





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Keypoints for the Development of the
„ W_tERT - Decision Support System“

A “WtERT Knowledge Pool” may help local stakeholders to classify their problems and to lead them through the first steps of decision-making.

- Increase environmental awareness of waste problems
- Analyze the local current situation
- Get new ideas for setting rules for the implementation and the organization of waste management
- Inform about fees and taxes ...



W_tERT
Waste to Energy Research
and Technology Council - Germany

Keypoints for the Development of the
„W_tERT - Decision Support System“

W_tERT Germany wants to pool the experience gained in the global WtERT organizations and their partners and offer it to stakeholders all over the world as a



Decision Support System (DSS).

See steps to a respectable W_tERT - DSS:



W_tERT
Waste to Energy Research
and Technology Council - Germany

W_tERT partners bring
together what is
important in waste to
energy...

TOP THEMES



Prof. Nickolas John Themelis awarded with CEWEP Phoenix Award for his outstanding contributions to the Waste-to-Energy sector

Professor Nickolas John Themelis received the CEWEP Phoenix Award for his outstanding contributions to the Waste-to-Energy sector during a Phoenix Award Ceremony held on 16th June 2016 in Rotterdam, the Netherlands.

[More Information >>>](#)

Source: CEWEP
Image: CEWEP



W_tERT Germany's bridge to Africa

Prince Asfa-Wossen Asserate and W_tERT Germany conclude a contract in order to gather information about countries.

[More Information >>>](#)

Source: W_tERT Germany



Study tour organized by W_tERT Germany

W_tERT Germany will guide a delegation of high-ranking representatives of the "Federation of Thai Industries" to the waste utilization plant in Ingolstadt and to the fermentation plant in Warrgau on 7th October.

[More Information >>>](#)

Source: W_tERT Germany



Papers of the conference "IRRC Waste-to-Energy 2016" are now available

From 05th till 06th September the conference "IRRC Waste-to-Energy 2016" was held in Vienna by TK Verlag Karl Thomé-Kozmiensky. Now you can find the papers in our knowledge-pool.

[More Information >>>](#)

Source: W_tERT Germany

LATEST NEWS

Study tour organized by W_tERT Germany
(04.10.2016)

Veolia wins a €240 million contract to build and operate a waste-to-energy plant for the Syndicat Départemental d'Élimination des Déchets de l'Aube (SDEDA) – the Aube regional waste disposal authority
(03.10.2016)

Papers of the conference "IRRC Waste-to-Energy 2016" are now available
(30.09.2016)

W_tERT Germany's bridge to Africa
(25.09.2016)

Generous offer by Indus Media UG to W_tERT.EU members
(09.08.2016)

[More News >>](#)

BEST PRACTICE

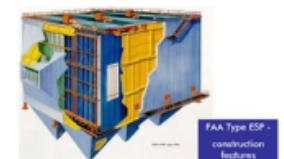
MBT Ljubljana, Slovenia



In Slovenia arises one of the largest and most modern waste treatment plants in Europe.

Category: Recycling / MBT
Executing firm: STRABAG AG

Flue Gas Cleaning



The final unit of the incineration plant is one of the most important parts as it has the objective of cleaning the air pollutants produced.

Category: Incineration
Executing firm: ete.s - Ingenieurgesellschaft für Energie- und Umweltengineering & Beratung mbH

Batch Dry Fermentation





W_tERT
Waste to Energy Research
and Technology Council - Ger

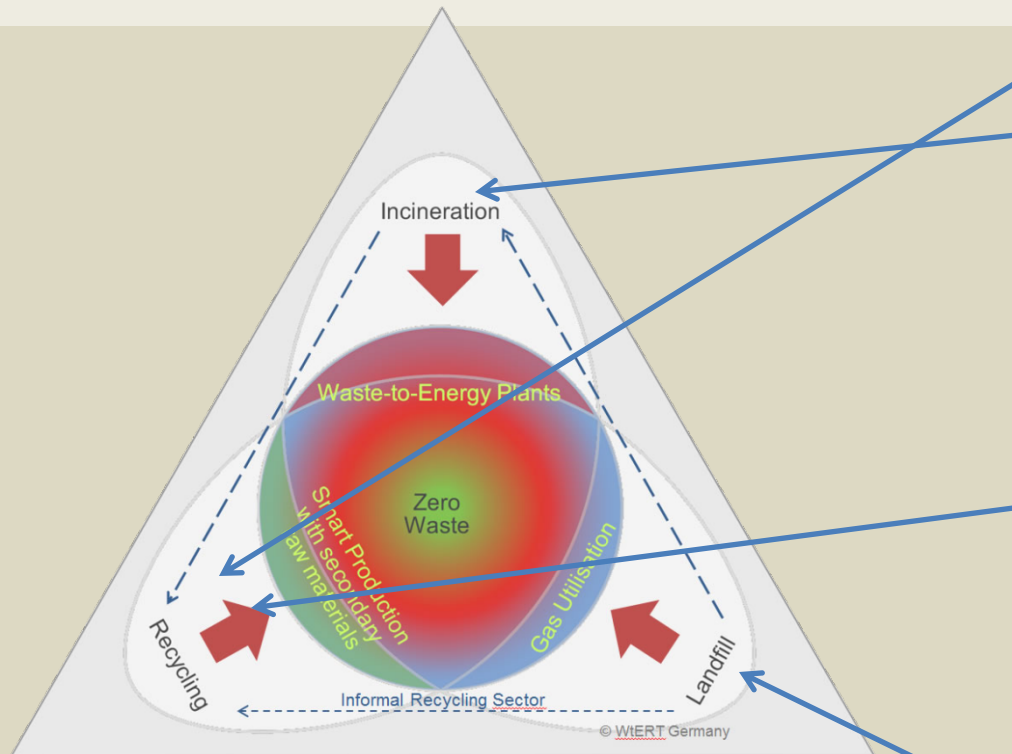
W_tERT partners
present information
of their country ...

... from Denmark
and maybe your
country too!

The screenshot displays the WtERT website interface. At the top, the WtERT logo and name are visible, along with navigation links for Countries, Technologies, Network, News & Events, and About Us. The main content area features a map of Denmark with a search bar labeled 'WtE Plants'. Below the map, there are several sections: 'Current State of Waste Management' with a link to 'Current state W2E Denmark'; 'NEWS' with a link to 'News linked with Denmark'; 'PUBLICATIONS' with a link to 'Papers linked with Denmark'; 'EXPERTS' with a link to 'Experts linked with Denmark'; and 'BEST PRACTICE' with a link to 'In programming Best Practices from Denmark linked with involved W_tERT partners'. A 'LATEST NEWS' section on the right side of the map displays three recent news items: 'Study tour organized by WtERT Germany (04.10.2016)', 'Veolia wins a €240 million contract to build and operate a waste-to-energy plant for the Syndicat Départemental d'Elimination des Déchets de l'Aube (SDEDA) - the Aube regional waste disposal authority (03.10.2016)', and 'Papers of the conference "IRRC Waste-to-Energy 2016" are now available (30.09.2016)'. Other news items include 'WtERT Germany's bridge to Africa (25.09.2016)' and 'Generous offer by Indus Media UG to WtERT.EU members (09.08.2016)'. A 'More News >>' link is provided at the bottom of the news section.



WtERT Waste to Energy Research and Technology Council - Germany



WtERT
Waste-to-Energy Research and Technology Council

[Countries](#) |
 [Technologies](#) |
 [Network](#) |
 [News & Events](#) |
 [About Us](#)

Partners

WtERT Partners working under the full approval of the Waste-to-Energy Technology Council, New York.

adelphi

Arbeitskreis zur Nutzung von Sekundärrohstoffen und für Klimaschutz e.V.

ARGUS GmbH

Biologic GmbH & Co. KG

BTA International GmbH

CEWEP - Confederation of European Waste-to-Energy Plants e.V.

Convaero GmbH

CREED e.V. - Center for Research, Education and Demonstration in Waste Management

CUTEC Institut

EcoEnergy Gesellschaft für Energie- und Umwelttechnik mbH

EEW Energy from Waste GmbH

em&s GmbH - experts in markets and sciences

ete.a - Ingenieurgesellschaft für Energie- und Umwelt- engineering & Beratung mbH

European Compost Network ECN e.V.

ForumZ - Das Wissenportal für Kommunen

Havelberger Fahrzeug- und Maschinenbau GmbH

Horix Powermanagement

Indus Media UG

INTECUS GmbH

Martin GmbH für Umwelt- und Energietechnik

Modulo Beton Deutschland GmbH

Abfallverwertungstechnik & Abfallwirtschaft
Montanuniversität Leoben
Lehrstuhl für Abfallverwertungstechnik und Abfallwirtschaft

RWTH Aachen

STRABAG AG

TUM-München

Wandschneider + Gutjahr Ingenieurgesellschaft mbH

LATEST NEWS

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BEST PRACTICE

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Category: Recycling / MBT
Executing firm: STRABAG AG

Flue Gas Cleaning

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Category: Incineration
Executing firm: ete.a - Ingenieurgesellschaft für Energie- und Umweltengineering & Beratung mbH

Batch Dry Fermentation

The biogas produced from the waste can be converted in a CHP to electrical and thermal energy or fed as processed bio-methane into the natural gas grid or used as fuel (CNG).

Category: Recycling / Fermentation
Executing firm: BEKON Energy Technologies Co. & KG

MBT Warsaw, Poland

The Bio-Dry™ system is a static, aerated and flexibly enclosed reactor for the biological drying of various solid waste matters containing some biodegradable contents.

Category: Recycling / MBT
Executing firm: Convaero GmbH



W_tERT
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Keypoints for the Development of the
„W_tERT - Decision Support System“



Stakeholders want to get all W_tERT information
>>> “W_tERT Knowledge Pool”!.



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Doing Business with the
„W_tERT – Knowledge Pool“

W_tERT offers information and free knowledge on
Waste to Energy **for stakeholders** all over the world.



W_tERT Cooperation Partners get:

- Reliable feasibility to post knowledge and products
- Contact to prospective customers
- First pull on discussion
- Space for branding (Advertise Banner)
- Online reputation for their experts
- Business opportunities

Under monitoring of GWC



W_tERT
Waste to Energy Research
and Technology Council - Germany

Doing Business as local
W_tERT – Organization

All W_tERT organizations offer information and knowledge on Waste to Energy **for stakeholders.**



Local W_tERT organizations:

- Increase the speed of knowledge transfer
- Widen the diversity of waste management solutions
- Help local stakeholders to push better solutions and create sustainable resource management
- Making business for all the partners



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Doing Business as local
W_tERT – Organization

Full implemented of the W_tERT Knowledge Pool”
can help local stakeholders

Let us work together to develop it fully implemented

➤ and contact: bauer@wttert.eu



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Doing Business as local
W_tERT – Organization



WtERT
Was
and

WtERT Germany`s bridge to Africa

Prince Asfa-Wossen Asserate and WtERT Germany conclude a contract in order to gather information about countries

Prince Asfa-Wossen Asserate, Ethiopian-German executive consultant and WtERT Germany conclude a contract in order to gather information about countries and specialist expertise dealing with the subjects of "Waste to Energy" and "Resources" as well as to gain appropriate experts and project partners in different African countries for the exchange of knowledge.

As a member of WtERT Council (Waste-to-Energy Research and Technology Council) WtERT Germany GmbH considers its special task in identifying outstanding professional examples of various implementations of the Waste-to-Energy idea and to provide a broad basis for bundling expertise and experiences. To demonstrate that the Waste-to-Energy idea offers valuable solutions in all levels of waste and resource management the sections of landfill, incineration and recycling are next to one another in a neutral position – other than known from the common waste hierarchies.

The picture below shows Prince Asfa-Wossen Asserate, Professor Martin Faulstich, the founder of WtERT Germany and Werner Bauer Vice President of GWC at the expert conference "Product Stewardship", which was performed in cooperation with ATAB, the professional association of Bavarian operators of thermal waste utilization this month in Ingolstadt, Germany.



local
tion



W_tERT
Waste to Energy Research
and Technology Council - Germany

Doing Business as local
W_tERT – Organization

Study tour organized by W_tERT Germany

W_tERT Germany will guide a delegation of high-ranking representatives of the “Federation of Thai Industries” to the waste utilization plant in Ingolstadt and to the fermentation plant in Warngau on 7th October.

The study tour for 17 high-ranking representatives from Thailand will be organized by WtERT Germany together with BEKON on request of the “Federation of Thai Industries”.

The study tour aims at enabling the exchange of knowledge in the field of “waste-to-energy” and disseminating German technologies in Thailand. For this reason the waste utilization plant in Ingolstadt and the fermentation plant in Warngau will be visited. To complete this topic a representative from CONVAERO GmbH will give a paper on “drying technologies”.

Members of this tour will be CEOs of two Thai companies, managing directors of three Thai companies and the director and two vice chairman from “The Institute of Industrial Energy” of the “Federation of Thai Industries”.



W_tERT
Waste to Energy Research
and Technology Council - Germany

Doing Business as local
W_tERT – Organization

Cooperation Agreement – with the W_tERT Community

between

Confederation of European Waste-to-Energy Plants - CEWEP

OPERATION COSTS

The Cooperation Partner shall contribute to the operation costs of the W_tERT community by paying a net fee of:

net EUR 1.000 /annum plus 19% MwSt. = 1.190 EUR/annum

by money order. The provider will bear all costs for bank charges or costs for the transfer and additional tax.

This Cooperation Agreement is valid for the period of 12 months. An invoice shall be issued at the beginning of the contractual period, in case of a renewal of this agreement; the invoice shall be issued at the beginning of the contractual year.



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and Technology Council - Germany

Doing Business as local
W_tERT – Organization

SUBJECT MATTER OF THIS AGREEMENT

To this end,

Confederation of European Waste-to-Energy Plants - CEWEP

(herein after: “Cooperation Partner”)

and

W_tERT Germany GmbH

conclude the following cooperation agreement:

SCOPE OF COOPERATION

Duties of the Cooperation Partner:

The Cooperation Partner shall provide and be responsible for the information submitted on

the topics:

“Energy Recovery & Climate Protection”, “Climate Protection” and “Circular Economy”