







The Future of Source Separation of Organic Waste in Europe


Characterization of biowaste and residual waste by means of a Mobile Waste Audit Unit

Erich Vogel / TBU Austria



E. Vogel: Waste characterization ~ 25 min

- **Introduction**
- **Driving forces for performing waste audits** 
Waste Management Planning - Limit Value Control - PR
- **Means & methods** 
Mobile Lab Unit - Sampling - Chemical-physical parameters
- **Examples & case studies** 
*Lombardy: Biowaste Collection - Istanbul: MSW Composting
Weilheim/Bavaria: MB Processing - Vienna: RDF Production
Styria: Waste Management Planning & Community Education*



Mobile Waste Audit Unit



Adjustable Screen
(mesh sizes 3–200 mm)

Manual Sorting
(up to 20 fractions)

**Registration of
Weight and Volume**

**Registration of
Moisture Content**

Lab Analysis
(ash content, C/N, heavy
metals, calorific value etc.)



Mobile Waste Audit Unit



Mobile Waste Audit Unit

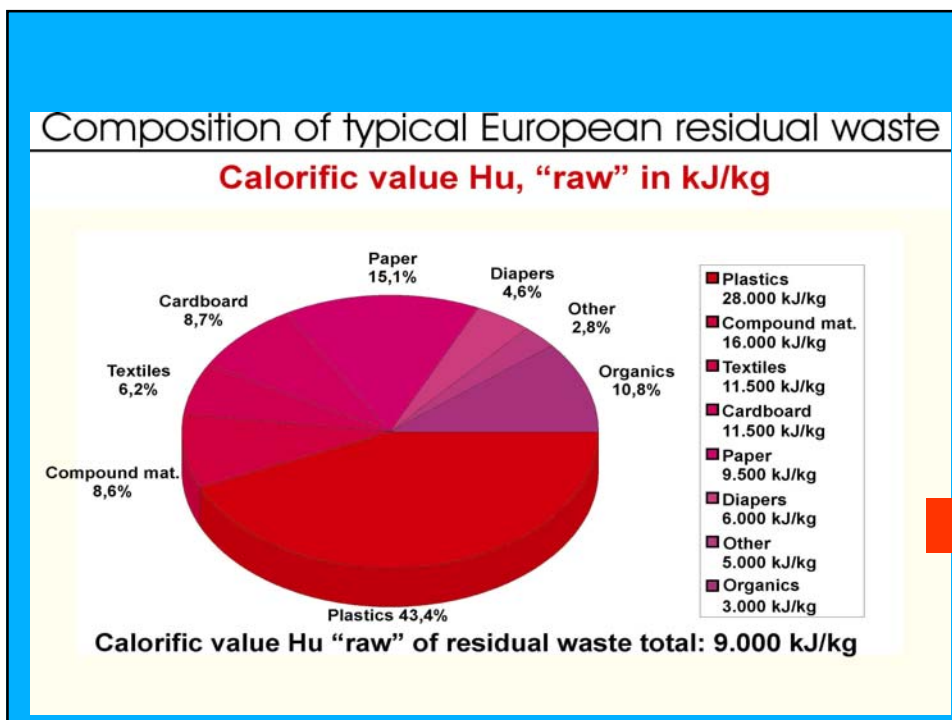
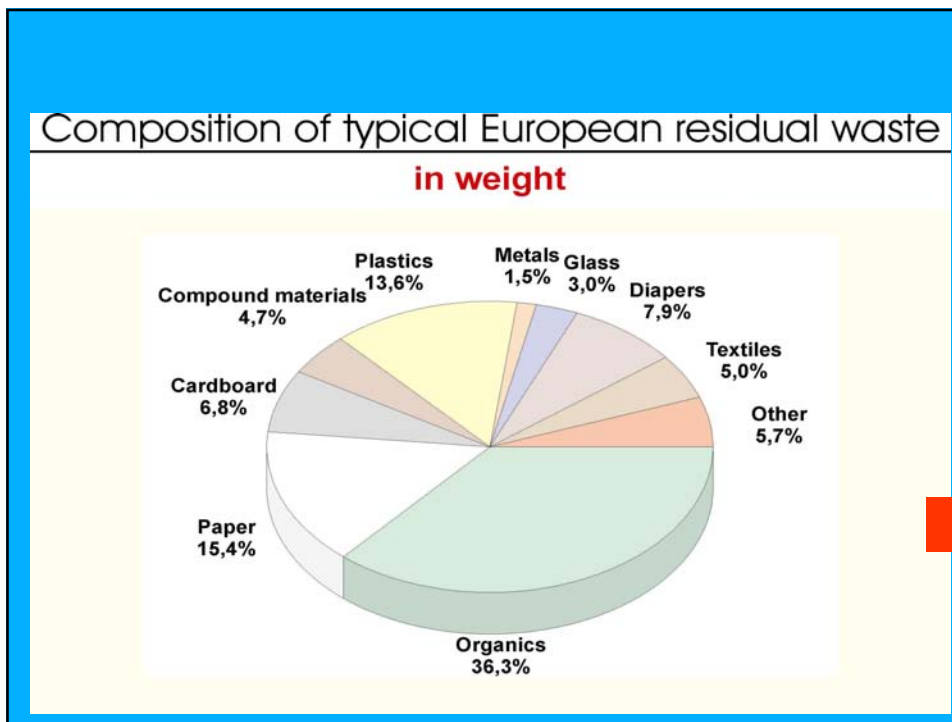
Budget Transport in standard 20" sea- freight container by
 Truck - Train - Ship



Case studies: Milan Province

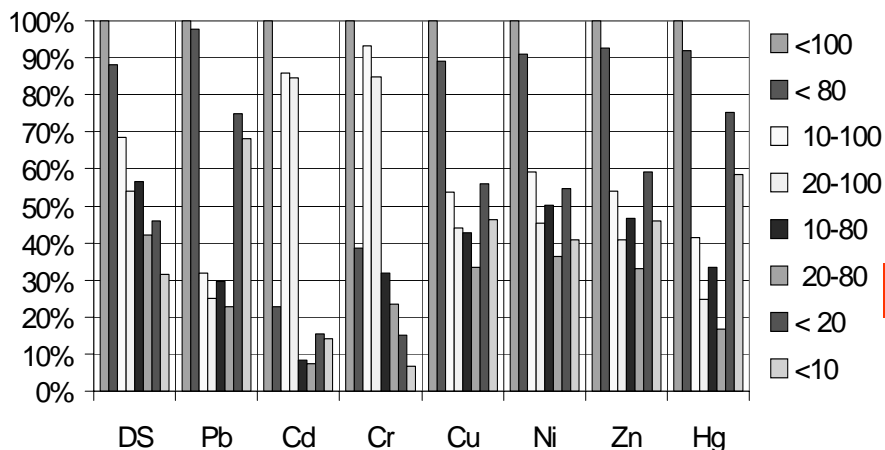
Municipality	Inhabitants	Putrescible Organic Content (including screen underflow 20 mm)
Carate Brianza	16.162	6,9%
San Donato Milanese	33.689	10,2%
Peschiera Borromeo	20.492	10,4%
Trezzo Sull'Adda	11.700	10,5%
Albate	5.255	11,0%
Seregno	39.589	12,2%
Pozzo D'Adda	3.544	12,3%
Vedano al Lambro	7.500	12,6%
Busnago	4.629	13,2%
Truccazzano	4.363	14,2%
Gessate	5.523	14,5%
Carugate	12.875	15,9%
Gorgonzola	17.862	17,0%
Monza	105.000	17,9%
Opera	13.435	18,1%
Paderno Dugnano	45.666	18,1%
Melegnano	16.105	18,5%
Sovico	7.028	19,8%
Colturano	1.903	19,9%
Melzo	18.685	20,4%
Vimercate	25.617	21,3%
Locate Triulzi	8.350	22,3%
Briosco	5.611	29,0%
San Giuliano Monzese	32.361	43,2%
462.944		
Arithmetic Mean	19.289	17,1%
Average (Median)	13.155	16,4%

ECN/ORBIT e.V. Source Separation Workshop 2003
 Pres. No. 21 "Characterisation of biowaste and residual waste by means of a mobile waste audit unit" – Mr. M. Steiner, Mr. E. Vogel



Case studies: Istanbul

Istanbul: MSW analysis - Heavy Metal Mass Balance



Case studies: Styria (Austria)

City of Graz: MSW Sorting Analysis - Public Exhibition

