



Sustainable Waste Management in Vienna

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MA 48-waste management, street cleansing & vehicle fleet
WTERT 2010 Meeting, 8.10.2010

Stadt  Wien
Wien ist anders

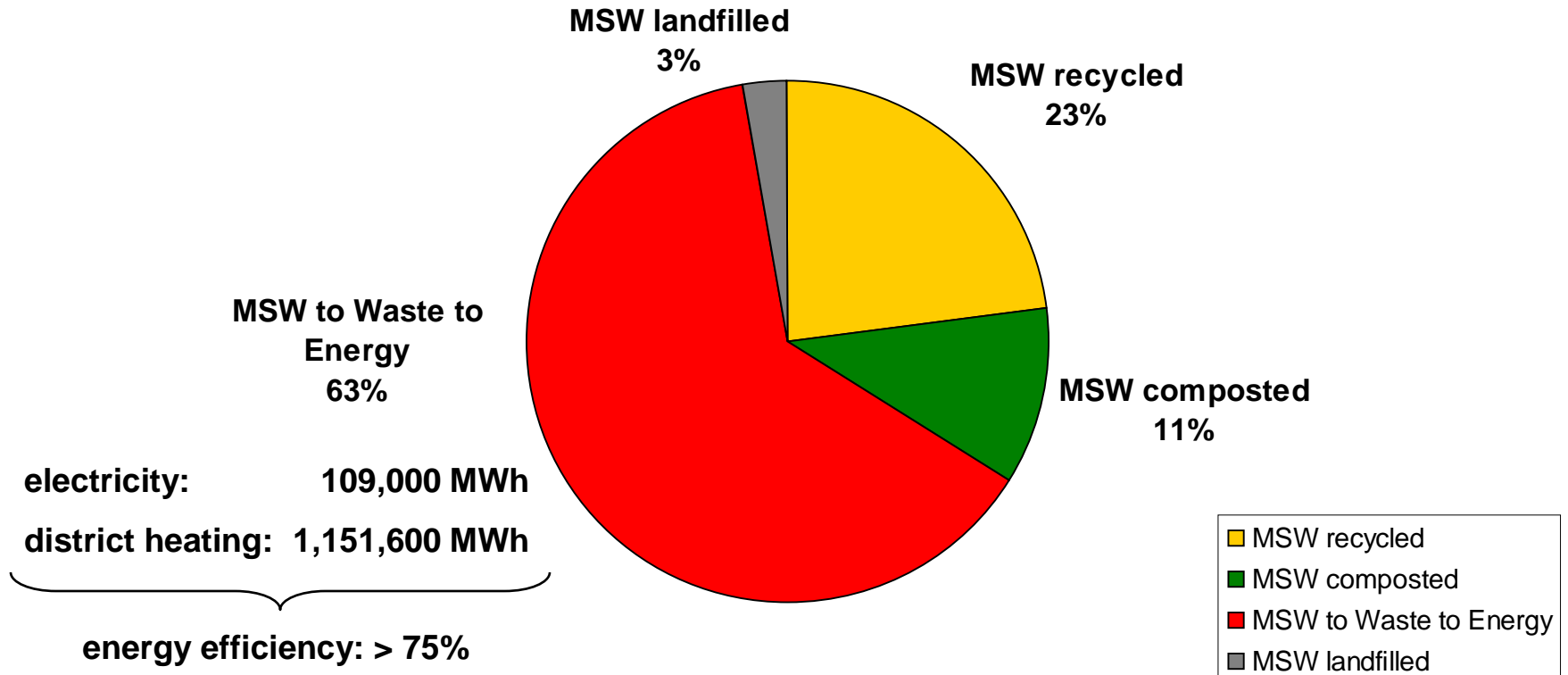
Austria/Vienna in figures

Austria		
area	[km ²]	83,858
inhabitants		8,206.500

Vienna (capital of Austria)		
area	[km ²]	415
inhabitants		1,687,271
density	[Inh/km ²]	4,010
Number of houses		167,554
Number of households		780,000

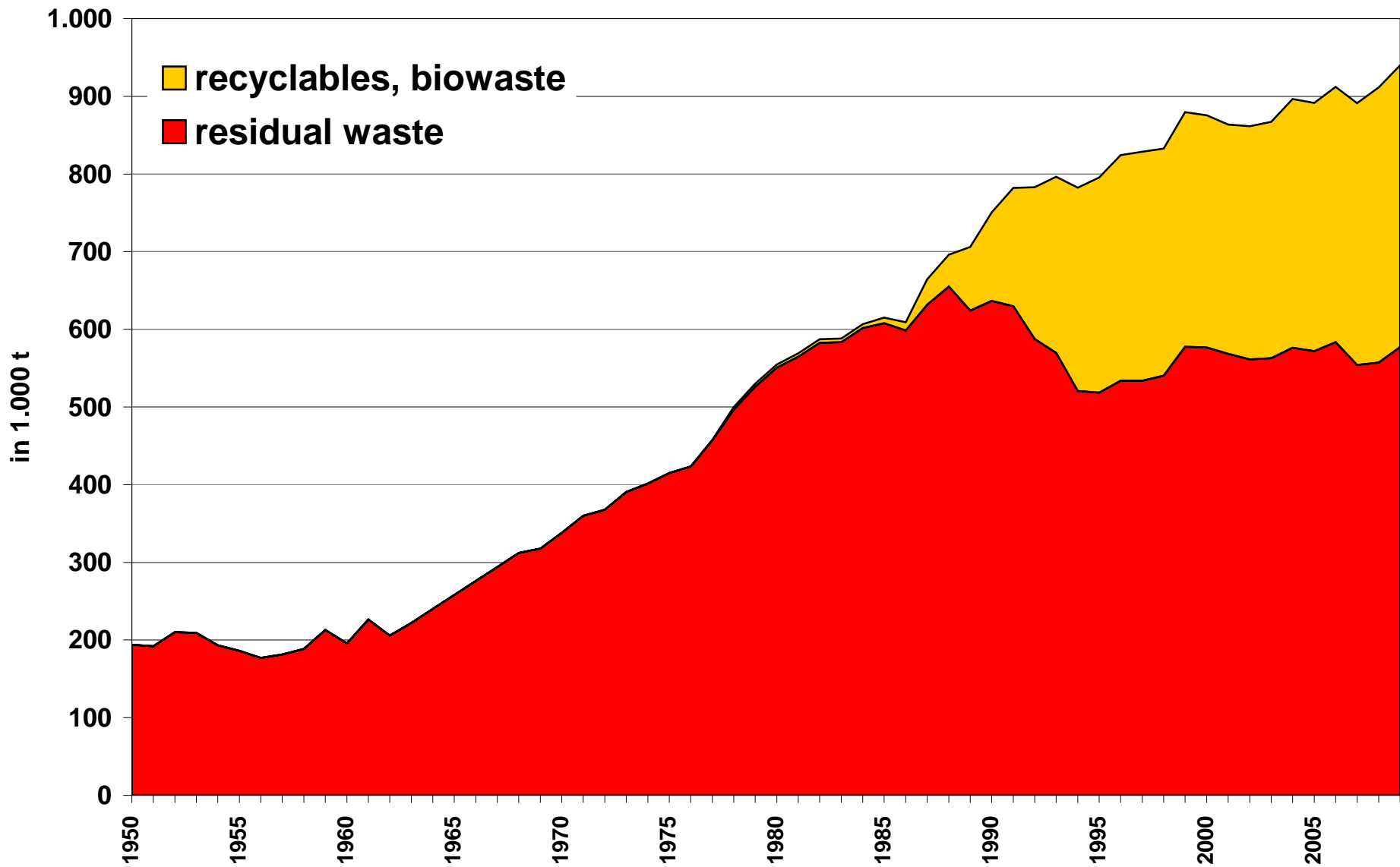
MSW in Vienna: 1,1 Mio. t

waste collected by MD 48 (2009): 1,057,000 tons (624 kg/inh)



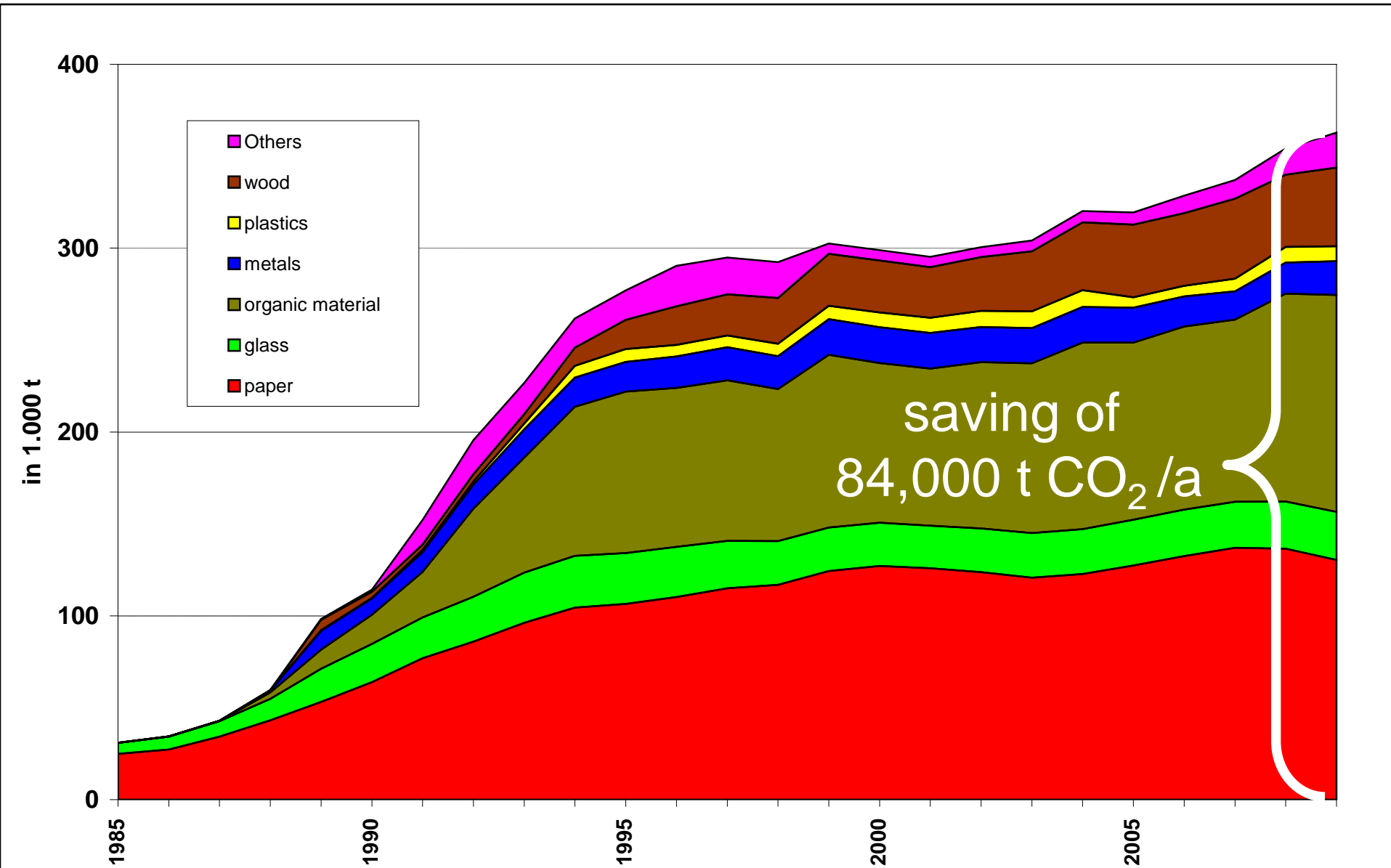
Development of MSW

MD 48, 1950-2009



Development of recyclabels, biowaste

MD 48, 1985-2009



Objective:

environmental education in order to foster the environmental awareness

Measures:

- Public information is focusing on the **education of children** due to the fact that they are perfect for spreading information among their families
- classic PR-work

Facts:

- 35 waste advisers, 30,000 h per year, 60,000 phone calls
- 1,000,000 visitors at our homepage per year

Communication

environmental education programm for children



Communication

classic PR work with posters and give aways



Communication – international contacts

bi-annual international waste management conference



Communication – international contacts

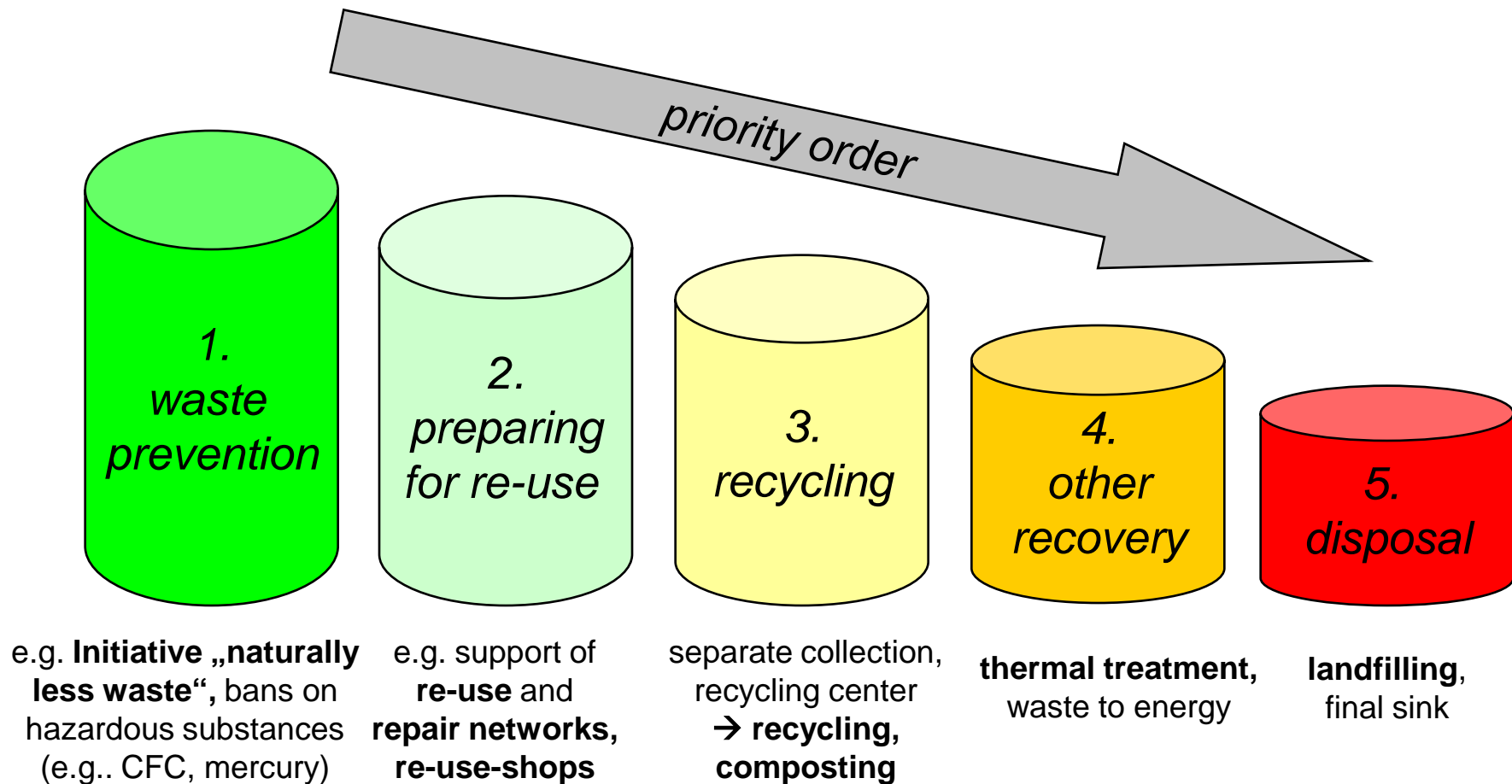


Dennis Meadows



Robert F. Kennedy

Waste hierarchy in EU



Waste prevention

- Projects – Funding for e.g.
 - reusable cup hire system since 2005

Cups are delivered and picked up at the end of the event (system already used successfully during events such as Life-Ball, Danube Island Festival (3 Mio. visitors), European Football Championship)

prevention of:
3 Mio. oneway-cups, 30 t waste, 220 t CO₂
 - Vienna Christmas gift bags
- Flea market („48er Basar“)
 - selling of re-usable goods from recycling centers
prevention of 800 t waste / year



Preparing for re-use




- Repair-network Vienna
 - Network of 50 repair-workshops for all kind of goods
- Repair-center for WEEE
 - Repairing and service of electric and electronic devices
 - Spare parts supply
- Trash design
 - Design products from waste materials



Waste collection



Collection schemes

type of waste	collection schemes		
	backyard collection	collection points	recycling center
	(pick up collection)	(bring collection)	(bring collection)
residual waste	X		
paper	X	X	X
biowaste	X	X	X
glass		X	X
metal		X	X
plastics		X	X
other recyclables			X
WEEE			X
hazardous waste			X
			

4,500 collection points



19 recycling centers

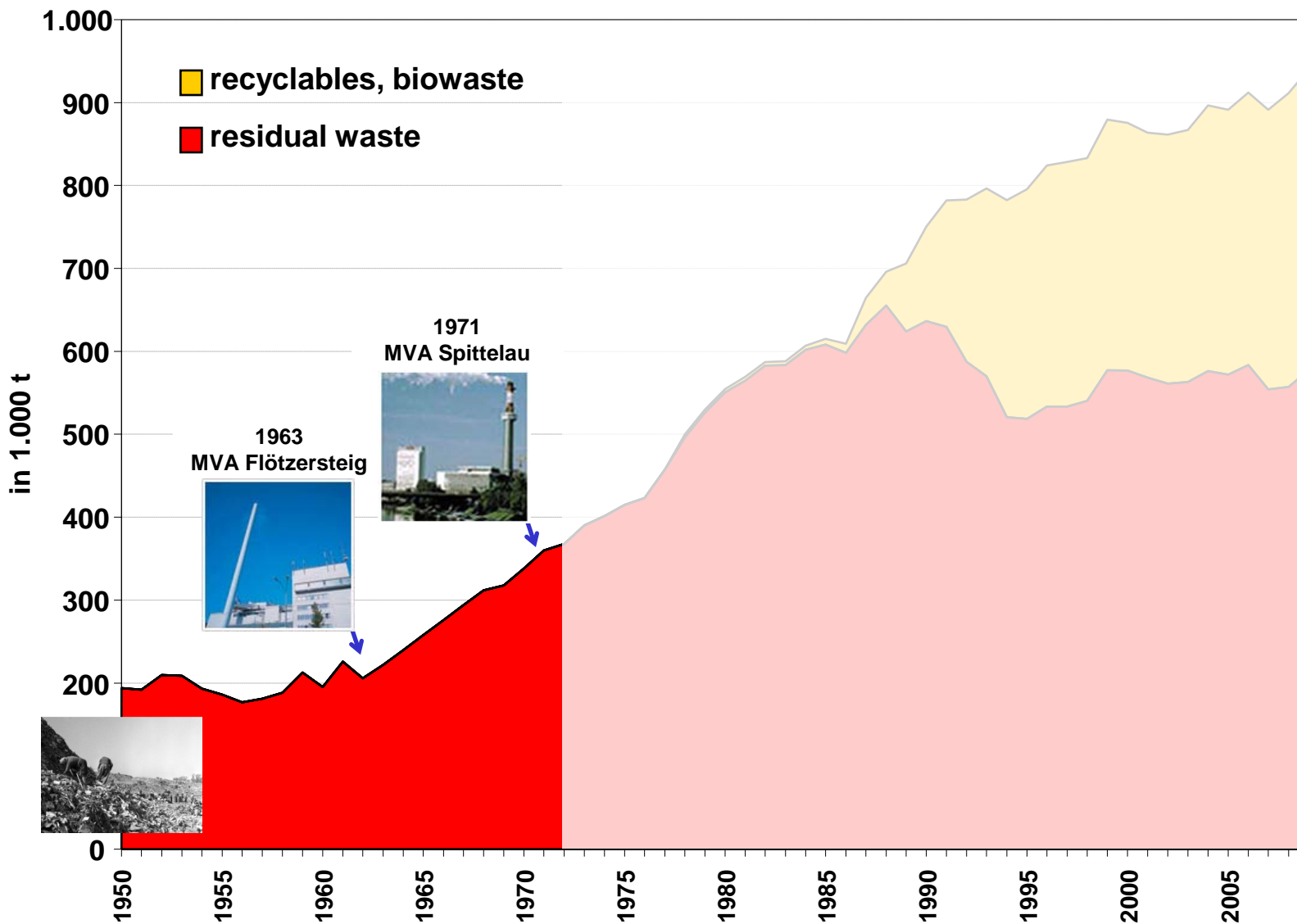


- recyclables
- hazardous waste
- WEEE
- bulky waste
- demolition waste
- re-use goods
- etc.

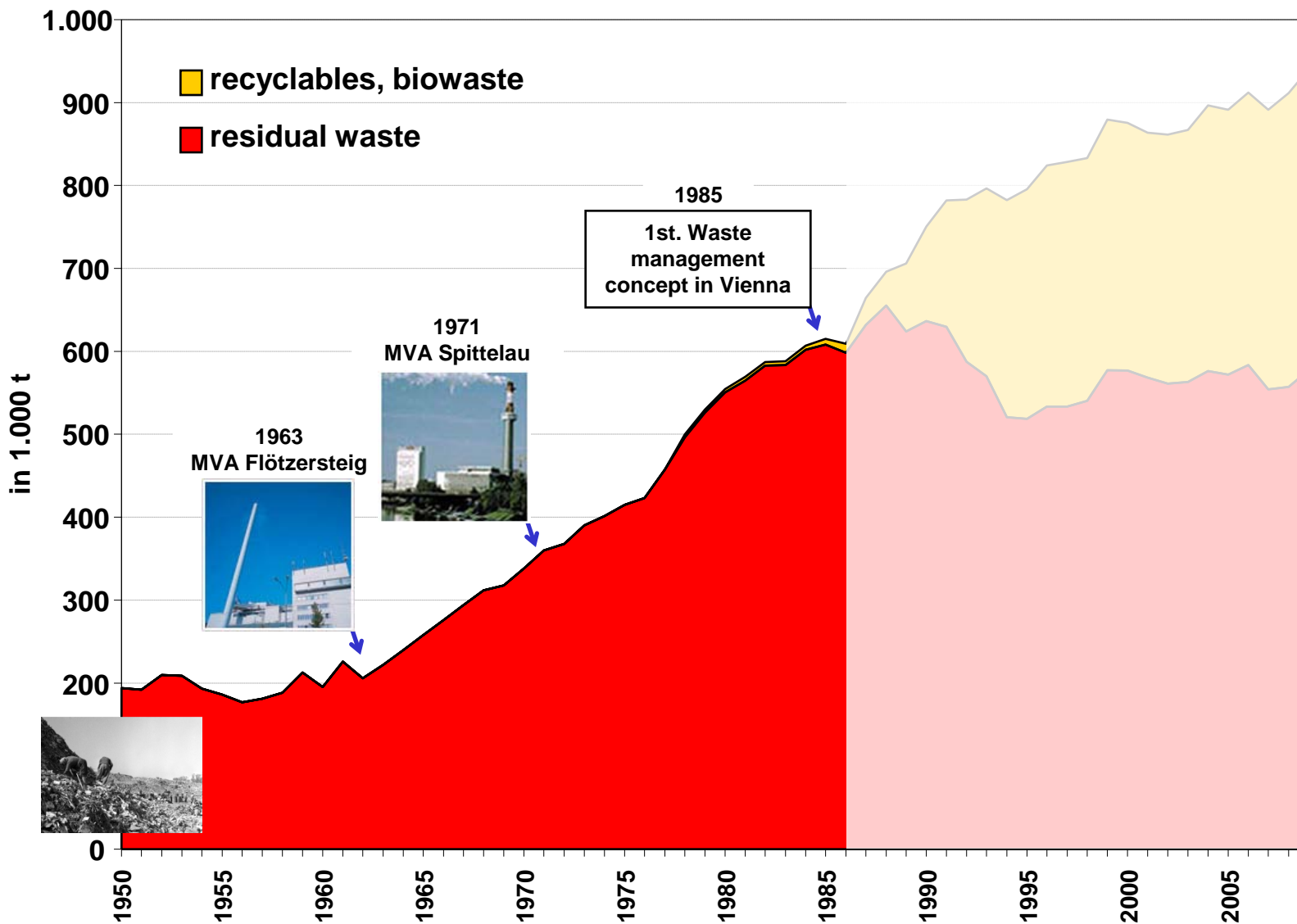
Waste treatment



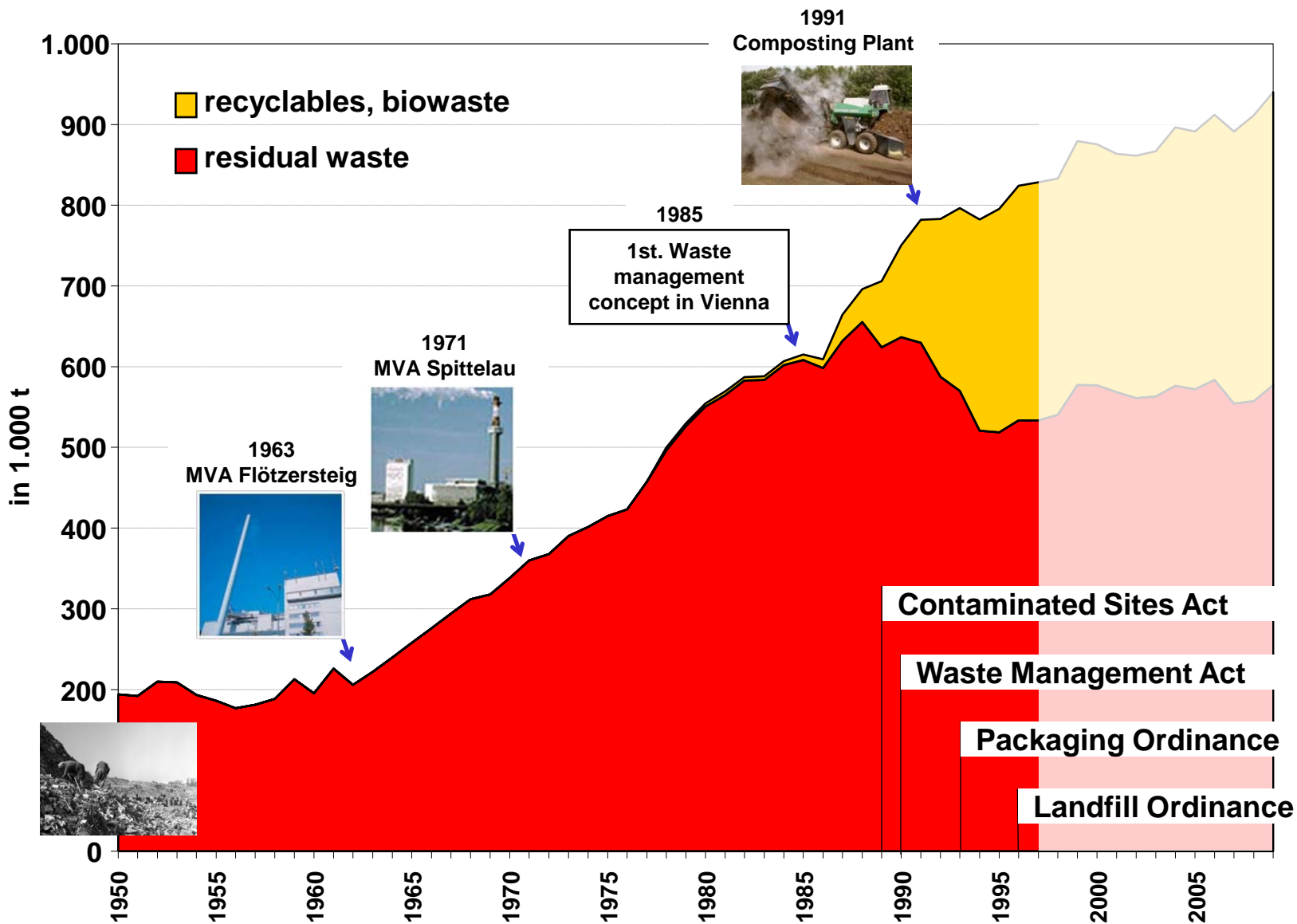
Waste treatment in Vienna



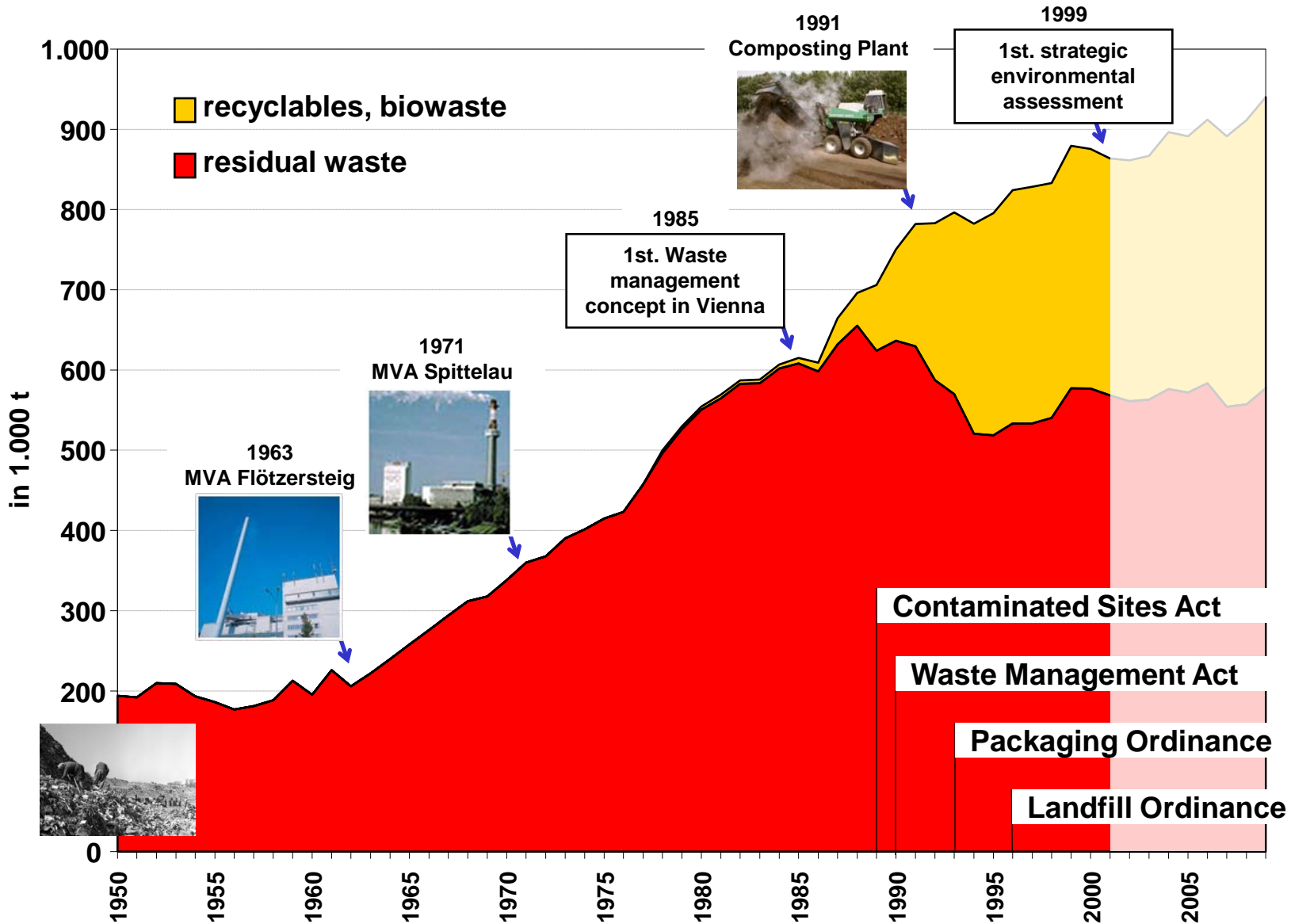
Waste treatment in Vienna



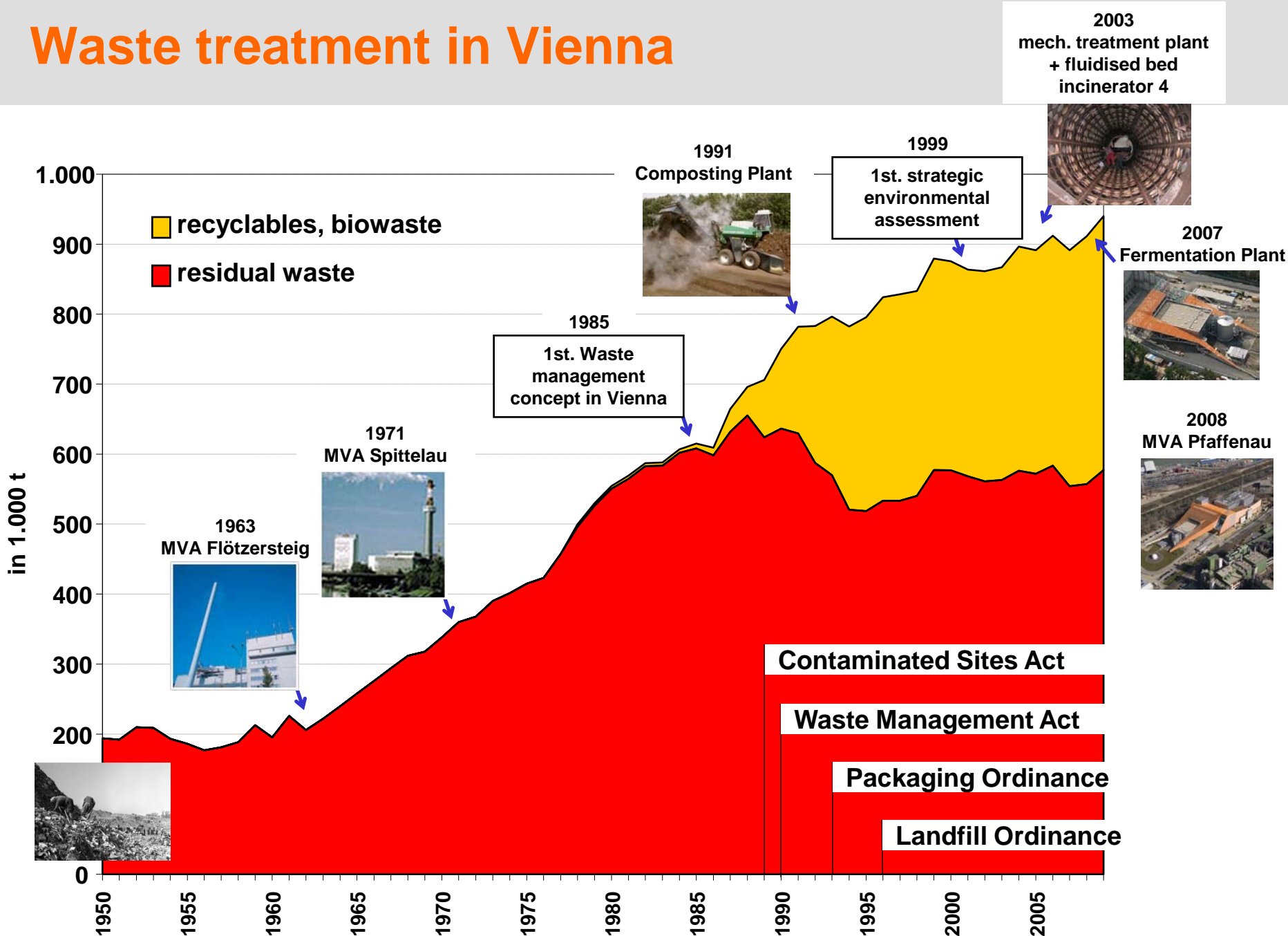
Waste treatment in Vienna



Waste treatment in Vienna



Waste treatment in Vienna



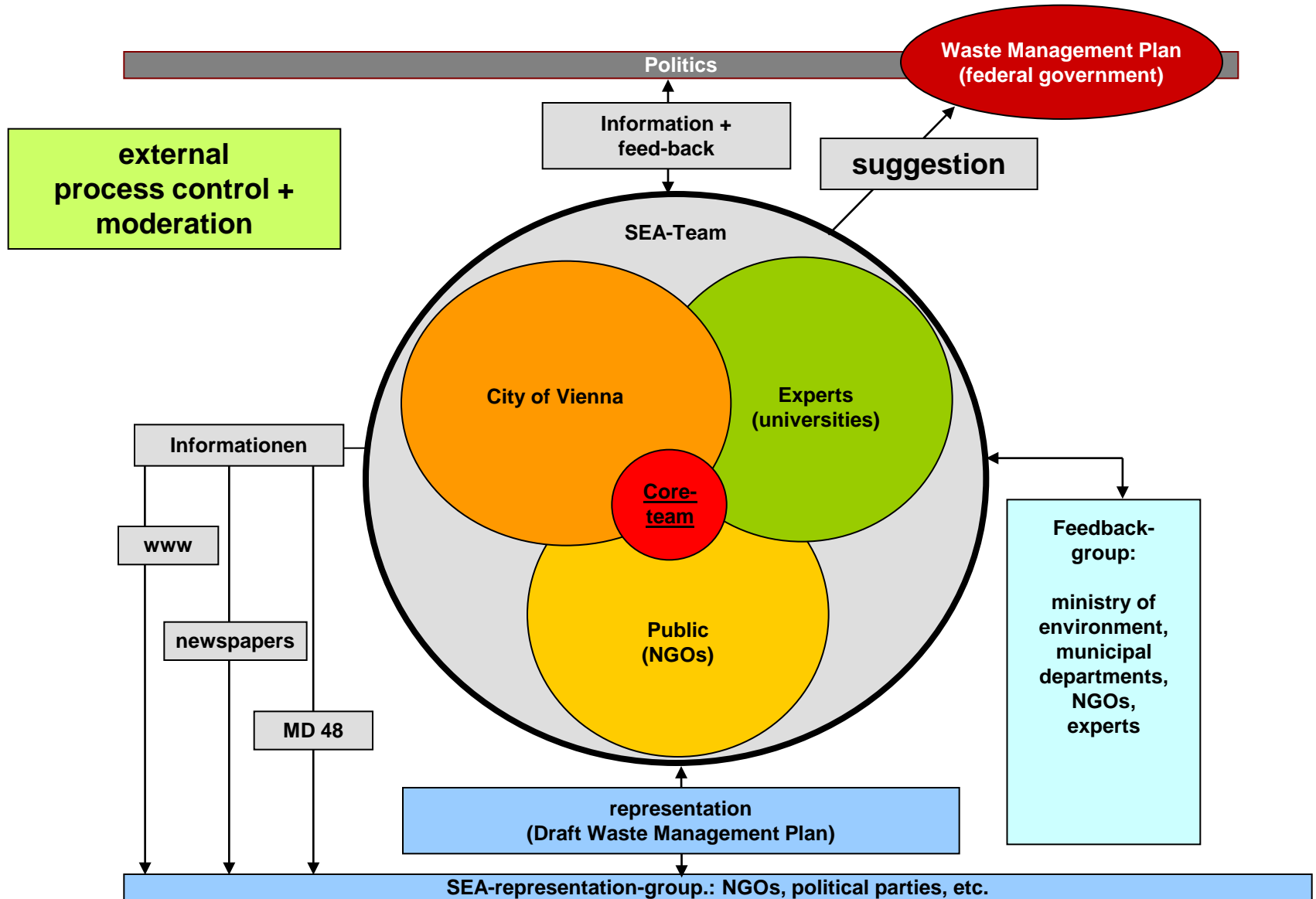
Strategic Environmental Assessment (SEA)

Objective:

Establishing (or updating) a Waste Management Plan
with a wide consensus

- numerous experts and NGOs are involved **from the very start**
- **intensive, time consuming process**
- SEA enables to come up with **sustainable solutions acceptable for everyone concerned**, the city and the environment alike

Strategic Environmental Assessment (SEA)



Strategic Environmental Assessment (SEA)

Why SEA?

Headlines in Austrian newspapers in 2008

negative examples
(no SEA)

Fuzz in Heiligenkreuz

Greens criticize waste-report on waste-incineration

Seebenstein, Pitten: Citizen nail down

Clear result against waste incinerator

positive examples
(with SEA)

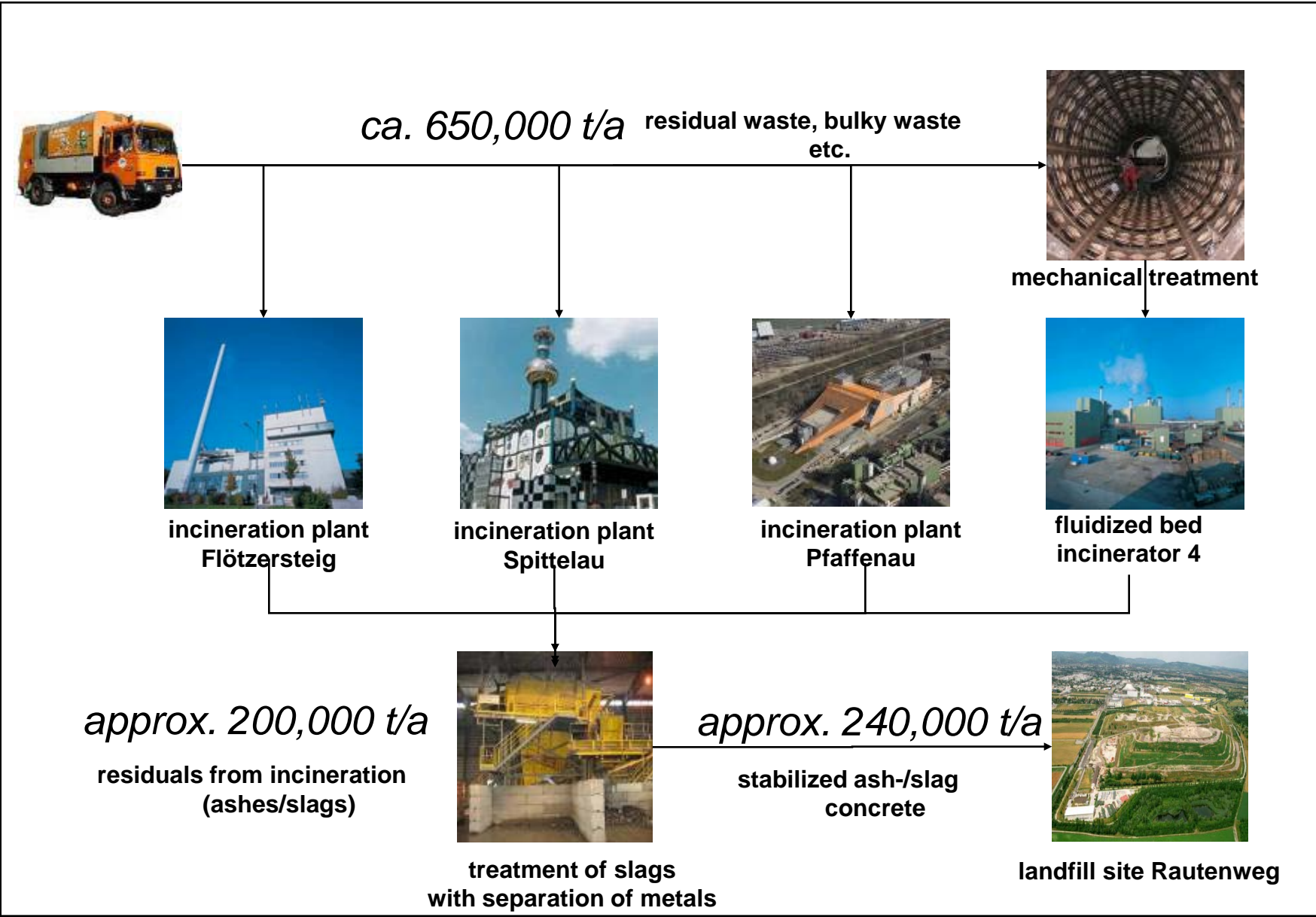
High-Tech-incinerator is opened

Vienna takes care of its waste. New waste incinerator is ready

clean: 250,000 t waste are transferred to clean energy

High-Tech for environment

Treatment of residual waste: The city of Vienna is responsible for the whole disposal chain



ca. 650,000 t/a residual waste, bulky waste etc.



mechanical treatment



incineration plant Flötzersteig



incineration plant Spittelau



incineration plant Pfaffenau



fluidized bed incinerator 4

approx. 200,000 t/a residuals from incineration (ashes/slugs)



treatment of slags with separation of metals

approx. 240,000 t/a stabilized ash-slag concrete



landfill site Rautenweg


Waste treatment plants in Vienna guarantee self-sufficiency and short distances

 Landfill site Rautenweg

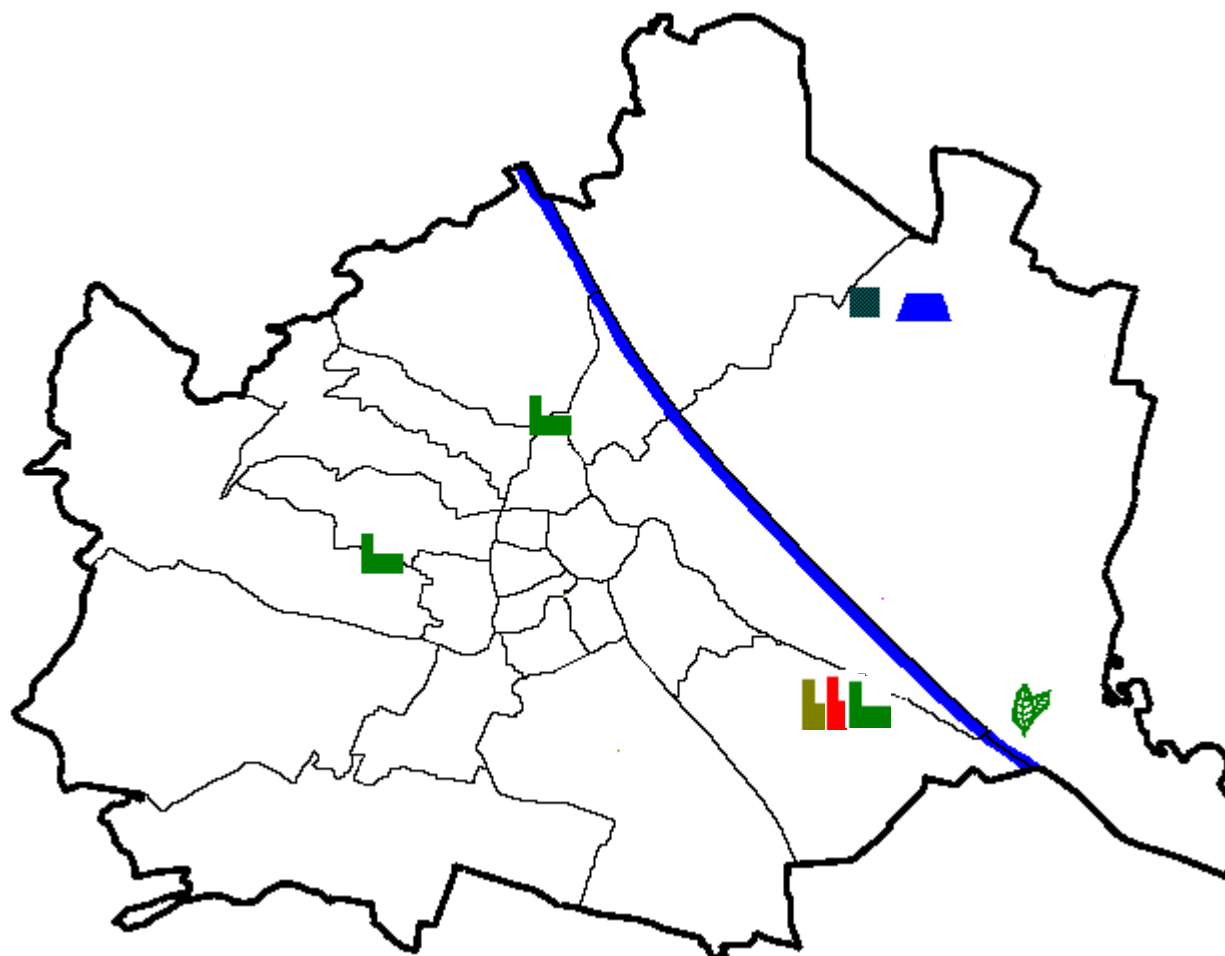
 Incineration plants (MVA I, MVA II, WSO 4)

 Incineration plant for hazardous waste

 Incineration plant Pfaffenau (2008) + fermentation plant

 Waste treatment plant (ABA)

 composting plant



District heating in Vienna - waste to energy

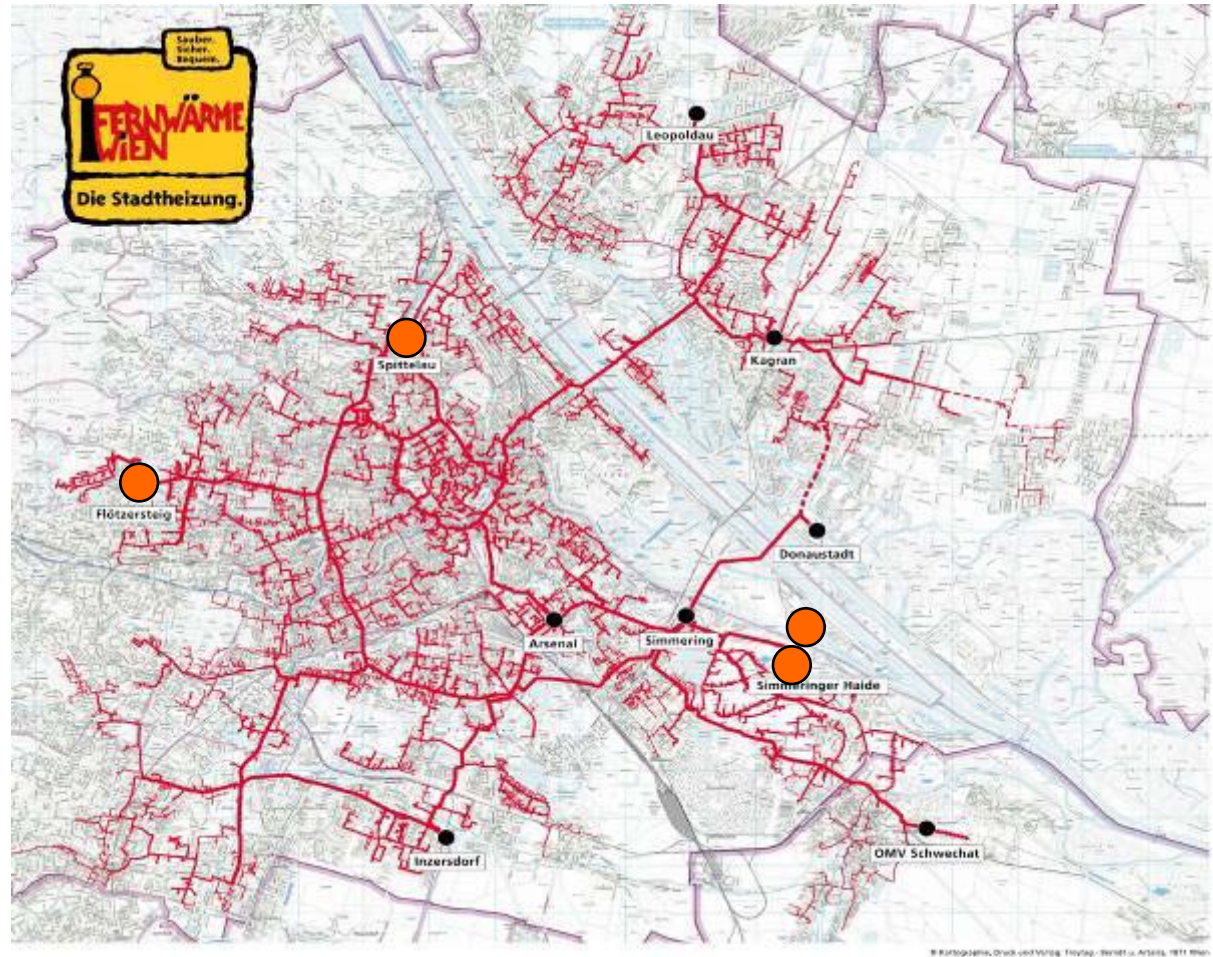
pipeline length:
1.100 km

flats: 300.000
(of 930.000)

major customers:
5.800

district heat:
5.580 GWh/a

30 % by incineration of waste
and sewage sludge



Treatment of Biowaste

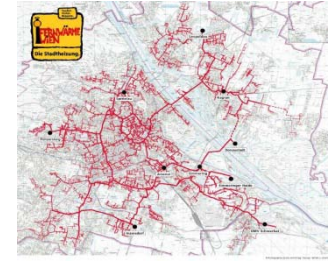
kitchen waste, biowaste
(inner districts)

17,000 t



fermentation plant
(starting 2007)

11,200 MWh/a



district heating

biowaste
(outer districts)

115,000 t



composting plant
(starting 1991)

35,000 t



high quality compost (A+)



organic agriculture



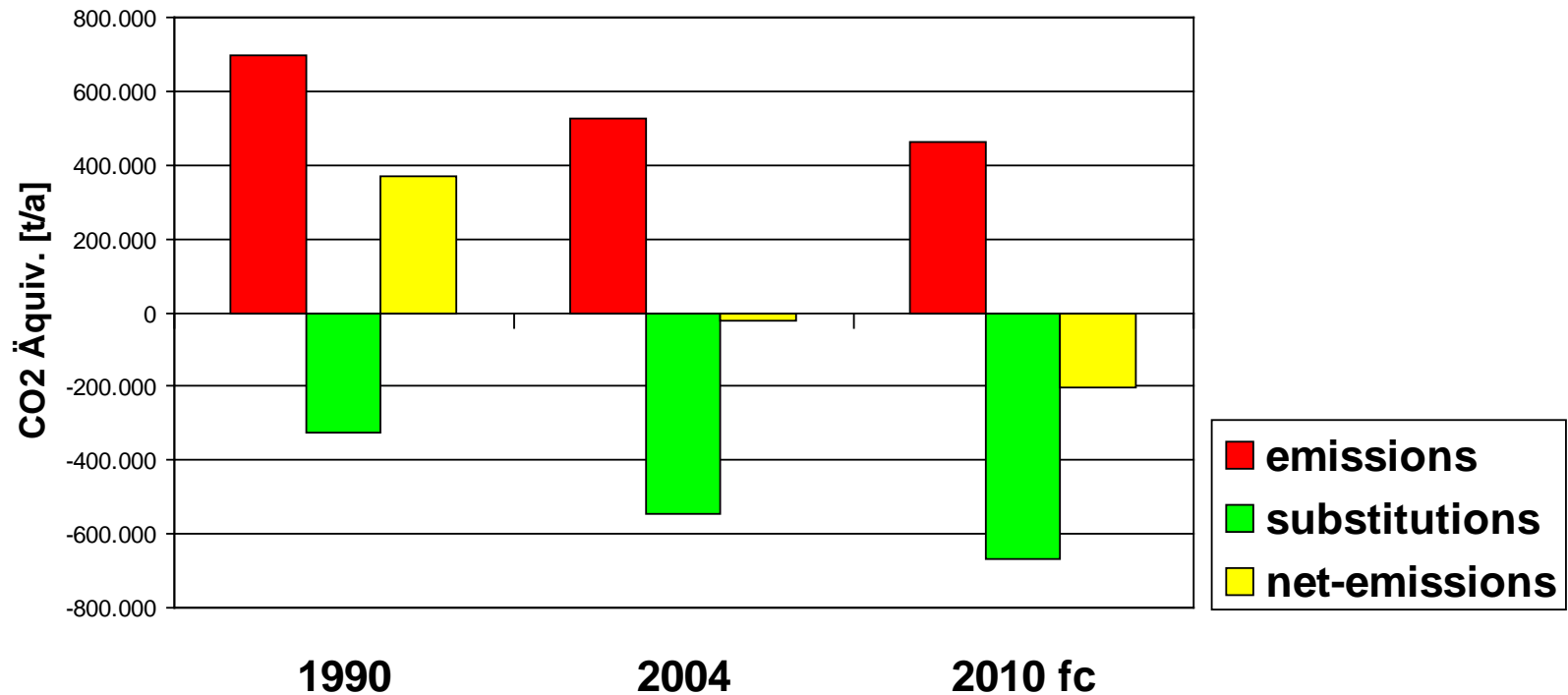
offer to take at
recycling centers
free of charge



potting soil
(free of peat)

Climate Protection

Contribution of Viennese waste management to climate protection



Vienna

on the way to sustainable waste management with

- strategic long term environmental planning
by means of modern planning instruments (eg. SEA)
- emphasis on communication
- self-sufficiency and short distances for waste-treatment
- maximum of output from waste (material recycling, energy recovery)

Thank you for
your attention!

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