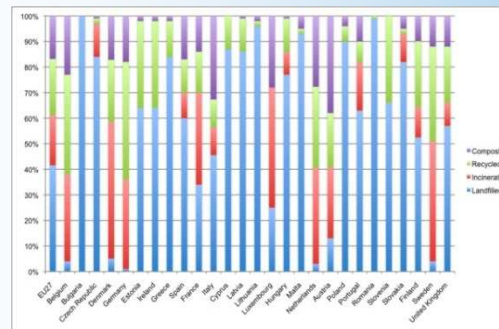




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ASSOCIATION  
OF CITIES  
AND REGIONS  
FOR RECYCLING  
AND SUSTAINABLE  
RESOURCE  
MANAGEMENT

# Measuring and comparing performances at local and regional level. ACR+ European Observatory



**ACR+ INTERNATIONAL CONFERENCE  
AND ANNUAL GENERAL MEETING  
26-27 OCTOBER 2011, GENOA**



# Outline

- Waste Framework Directive and Targets
- Introduction about the Observatory project
- Overview of results
- Presentation of key findings/ results from:
  - ORDIF – WG1
  - AMSA & LIPOR – WG2
  - ODENSE – WG3
- Panel Discussion/Debate
- Conclusions and next steps

	Directive	Year	Recovery targets	Recycling targets	Collection targets
Packaging waste	1994/62/EC	2008	60%	55%	
End-of-Life Vehicles	2000/53/EC	2006	85% incl. Reuse	80% incl. reuse	100%
		2015	95% incl. Reuse	85% incl. reuse	100%
Waste Electrical and Electronic Equipment (WEEE)	2002/96/EC	2006	70 – 80% (differs acc. to WEEE categories)	50 – 80% incl. reuse (differs acc. to WEEE categories)	Min. 4 kg per inhabitant per year
Batteries and accumulators	2006/66/EC	2012			25%
		2016			45%
Batteries and accumulators		2011		50–75% efficiency (differs acc.to battery type)	
Tyres	1999/31/EC	2006	Zero landfill of tyres		

	Directive	Year	Recovery targets	Recycling targets	Collection targets
Landfill of biodegradable municipal waste	1999/31/E C	2006	Reduction to 75% of the amount generated in 1995		
		2009	Reduction to 50% of the amount generated in 1995		
		2016	Reduction to 35% of the amount generated in 1995		
Paper, metal, plastic, glass waste	2008/98/E C	2015			Separate collection of at least paper, metal, plastic, glass
Waste from households and possibly from other origins	2008/98/E C	2020		50% of materials such as at least paper, metal, plastic and glass	
Construction and demolition waste (excl. soil and stones)	2008/98/E C	2020	70% (incl. reuse)		

Source: Halmut REICHEL (EEA)



# Implementing the Waste Hierarchy (WFD 2008/98/EC)

## ARTICLE 4 OF THE DIRECTIVE 2008/98/EC:

The following waste hierarchy shall apply as a **priority order** in waste prevention and management **legislation and policy**:

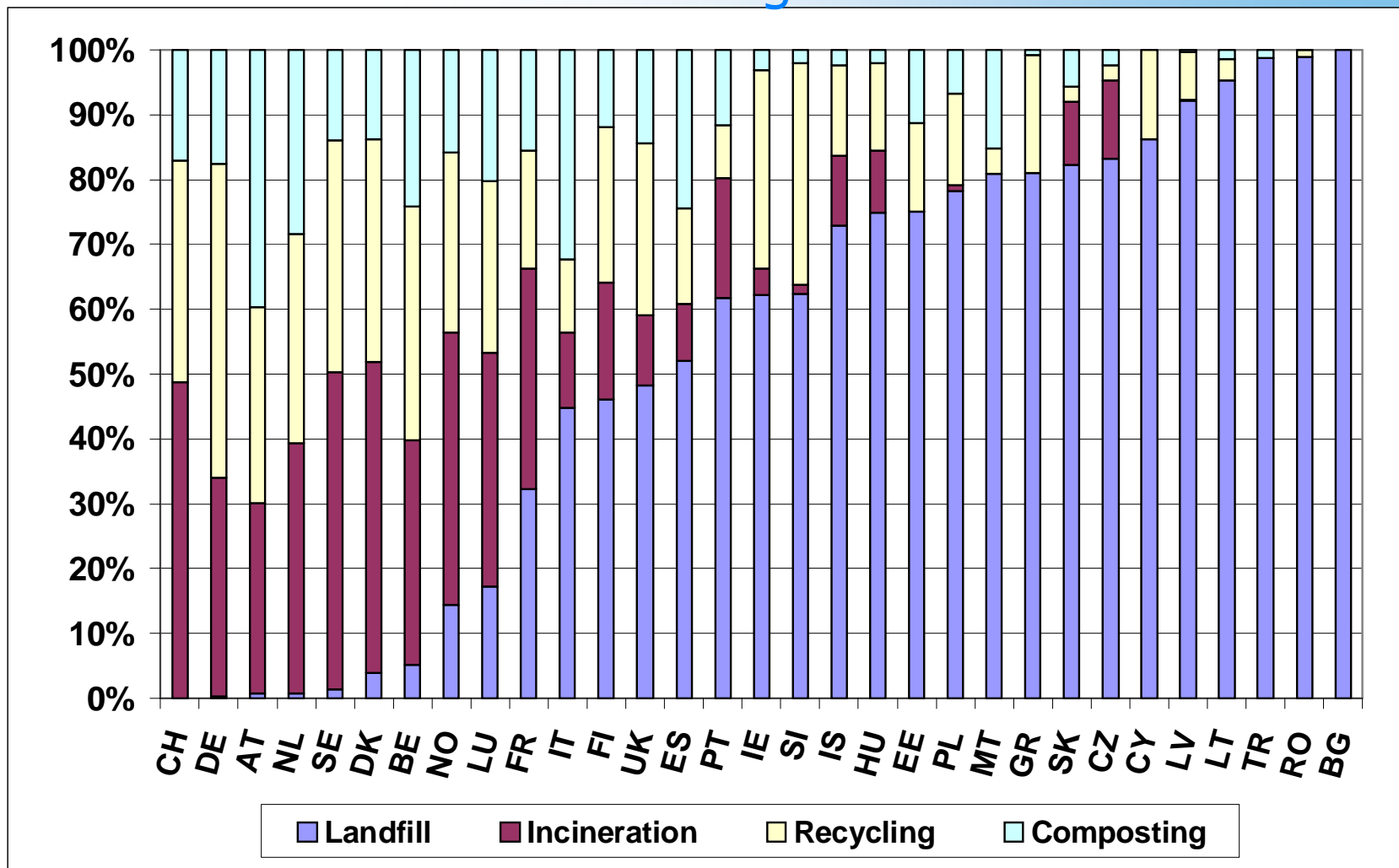
- (a) *prevention;*
- (b) *preparing for re-use;*
- (c) *recycling;*
- (d) *other recovery, e.g. energy recovery; and*
- (e) *disposal.*



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# EU 27 – the challenges for MS

EU Average: 38%



Source: Eurostat 2011

**Slide 6**

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**ODC4**

**i would highlight recycling**

Olivier De Clercq; 17/10/2011



# Why develop an Observatory programme for recycling performances

International and national statistics:

- are not greatly harmonised
- do not provide a good basis for benchmarking
- are not detailed enough to optimise waste management

Regional and local authorities are:

- closer to the reality of waste management
- could have easier access to waste and recycling figures
- in a better position for benchmarking and best practices





# European Decentralised Observatory for municipal waste recycling performances

## Concept:

Create a more transparent & effective collection of waste and recycling data via:

- a pioneer group of regional and local authorities of comparable categories (typology of cities/regions)
- simple shared objectives of quantitative benchmarking

## Benefits:

- To allow some true comparative analysis of waste management performances
- To clarify some statistical methodological approach
- To find smart solutions for optimisation of waste collection and recycling systems

# Main key themes



1. Common definitions ( i.e. MSW, similar waste)
2. Common indicators to measure recycling performance:
  - ▶ 1. General information ( population, targets, rates etc..)
  - ▶ 2. Selective Collection per material (%) , and kg/ inh/yr for LAs
  - ▶ 3. Municipal Solid Waste ( Recyclables vs Residual ) in percentage (%)
  - ▶ 4. Source of collected Municipal Solid Waste in percentage (%) and in tonnes
  - ▶ 5. Treatment methods, Tonnage of MSW treated, percentage difference of waste flows collected & treated
3. Record the methodology used for separate collection of waste (MSW) and identify good practices



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# Participants



<b>Group 1 ( &gt; 1 million inh.)</b>	<b>Group 2 ( 500,000 – 1 million)</b>	<b>Group 3 ( &lt; 500,000 inh.)</b>
<b>Flanders Region (OVAM, BE)</b>	<b>Metropolitan Area of Barcelona (ES)</b>	<b>Milton Keynes City Council (UK)</b>
<b>Catalan Waste Agency ( ES)</b>	<b>Liege (Intradel, BE)</b>	<b>Odense ( DK)</b>
<b>Ile de France (ORDIF, FR)</b>	<b>Lisbon (PT)</b>	<b>Grand Besançon (FR)</b>
<b>Madrid (ES)</b>	<b>Porto (LIPOR, PT)</b>	<b>Aalborg (DK)</b>
	<b>Milano (AMSA,IT)</b>	<b>Oeiras (PT)</b>
	<b>Belfast (UK)</b>	<b>County Limerick ( IR)</b>
	<b>Brussels Capital Region (BE)</b>	<b>Pamplona ( ES)</b>
	<b>Regional Council of Gipuzkoa (ES)</b>	<b>Maastricht (NL)</b>
	<b>Semardel (FR)</b>	



# The Waste Data Matrix

- A. Demographics (no. inh, housing type, density etc)
- B. Production of Municipal Solid Waste  
(total MSW /hhld arisings,kg/inh/year)
- C. Targets ( European/National/Local)
- D. Rates (total annual RR, total amount of MSW recycled, selective collection rate, capture rate)
- E. Selective collection/source separation of HOUSEHOLD waste
  - ▶ i) Selective collection per material (tonnes)
  - ▶ ii) kg/inh/yr per material
- F. Collection system - Source of collected MSW
- G. Treatment (composting, AD, mechanical recycling)

	2008	2009	2010
Population (all time)	175,298	176,827	178,704
Production of Municipal Solid Waste	84,800	93,119	112,827
Per capita waste arisings (kg/year)	485.82	498.79	527.01

# Progress so far...

**August 2011:**  
Completion of  
Waste Data Matrix  
by Local/Regional  
Authorities

**February 2011  
- June 2011:**  
Amendments to the  
Waste Data Matrix  
/ guidelines

**November –  
December 2010 :**  
Call for participants  
and Co-leaders

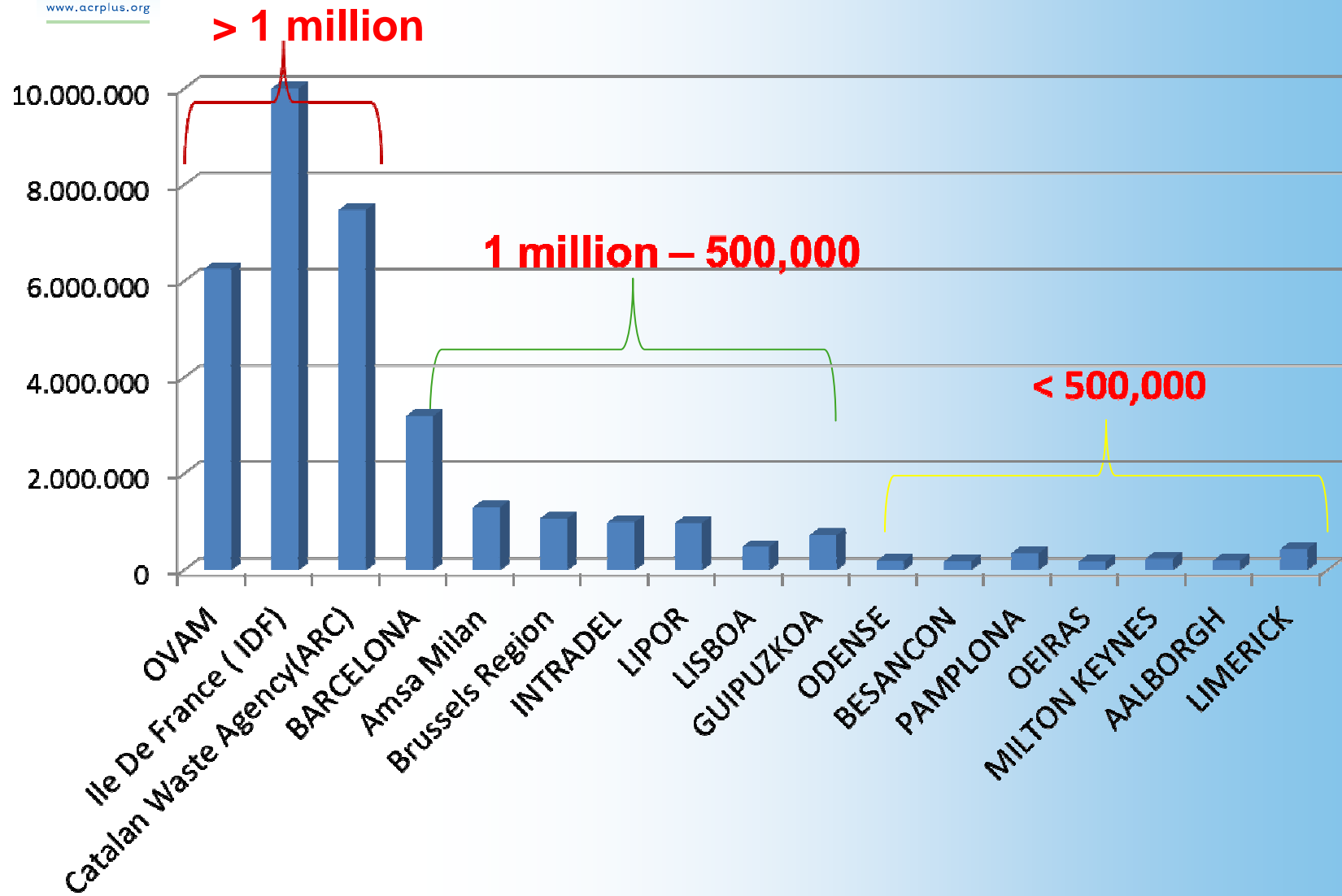
**September 2010:**  
Call for Interest –  
Launch of the  
Observatory



**October  
2011:**  
**Results &  
next steps**



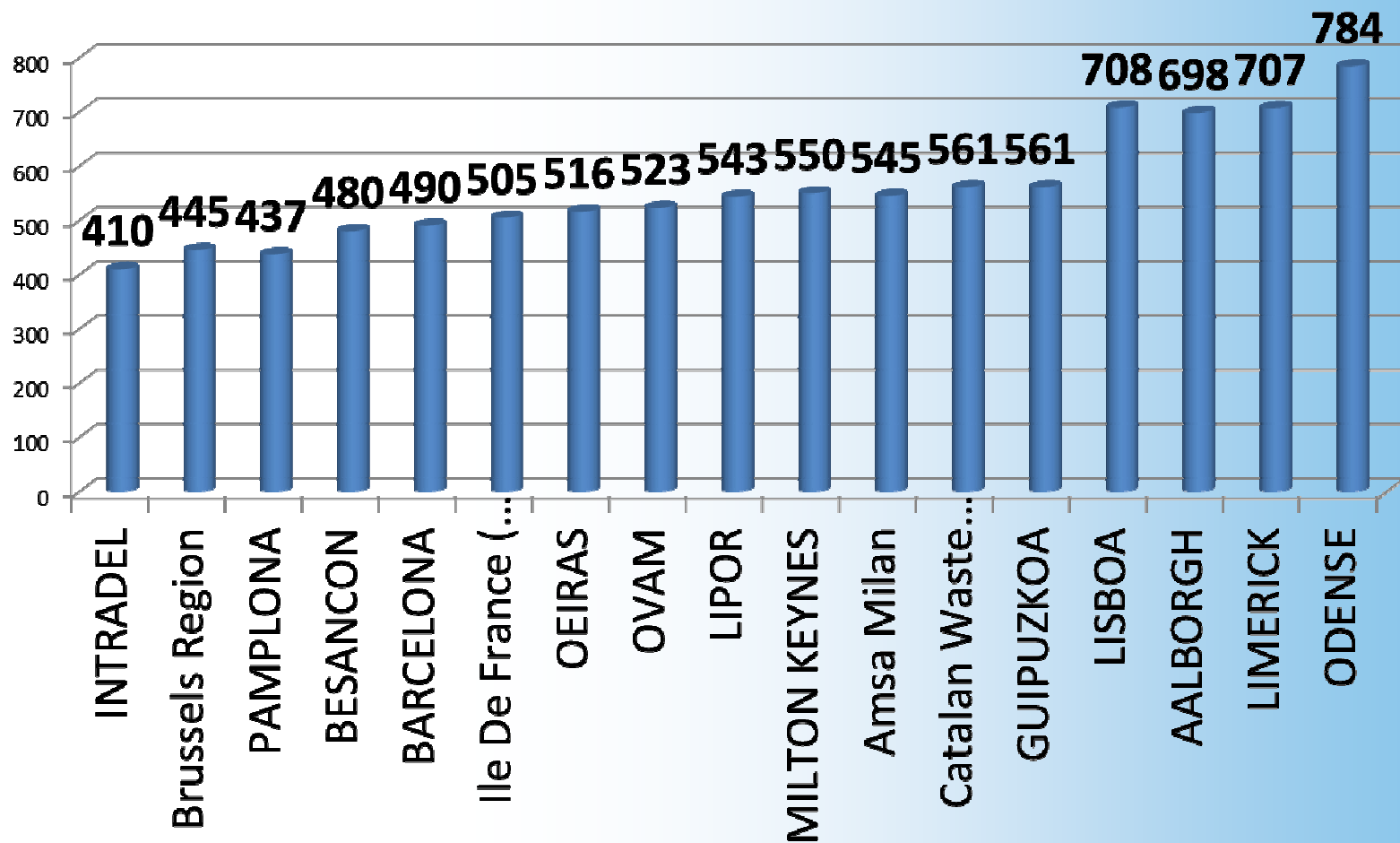
# Participants (no. of inh.)





# Amount of MSW (kg) produced per inhabitant

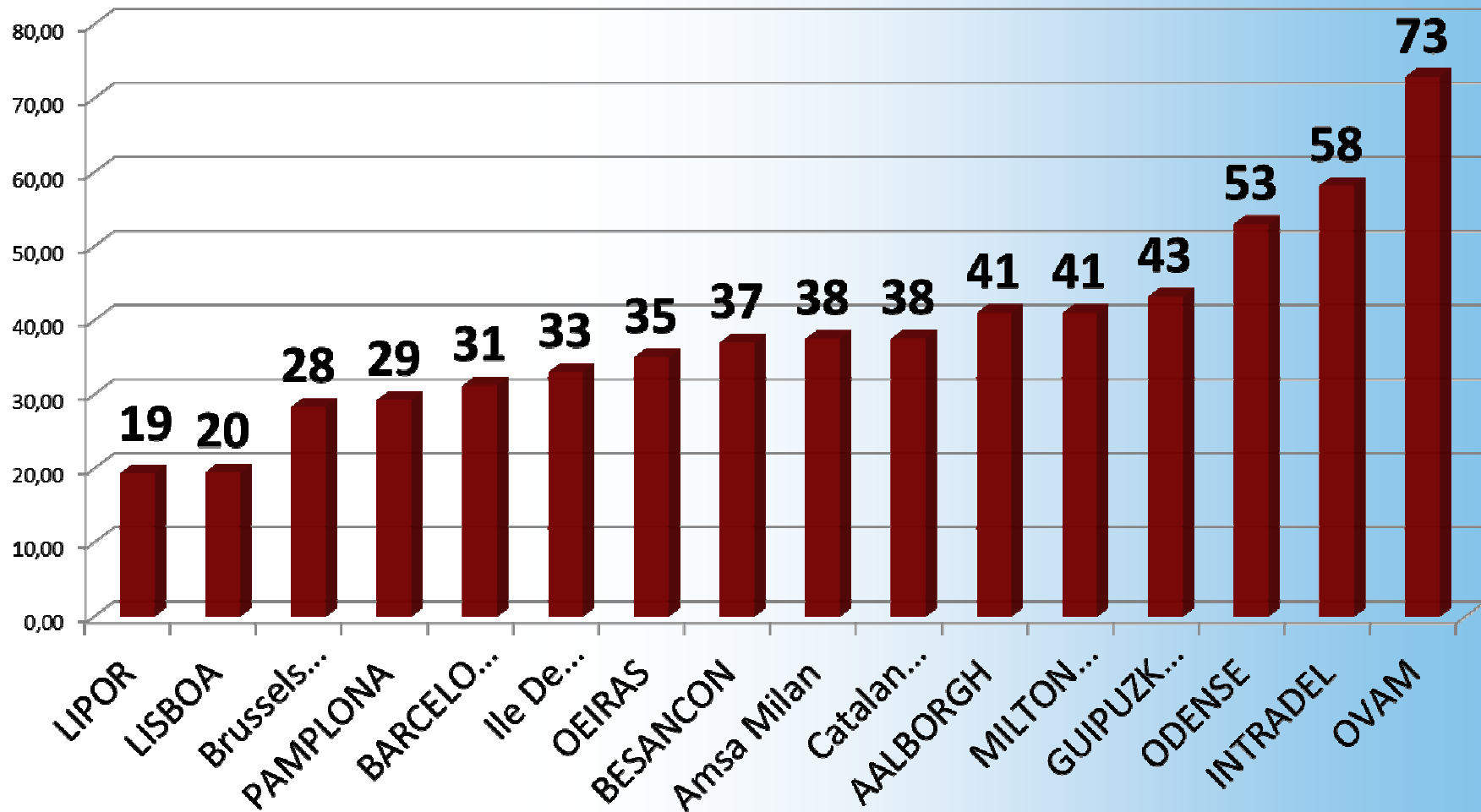
Amount of MSW (kg) produced per inhabitant





# Selective Collection Rate (%)

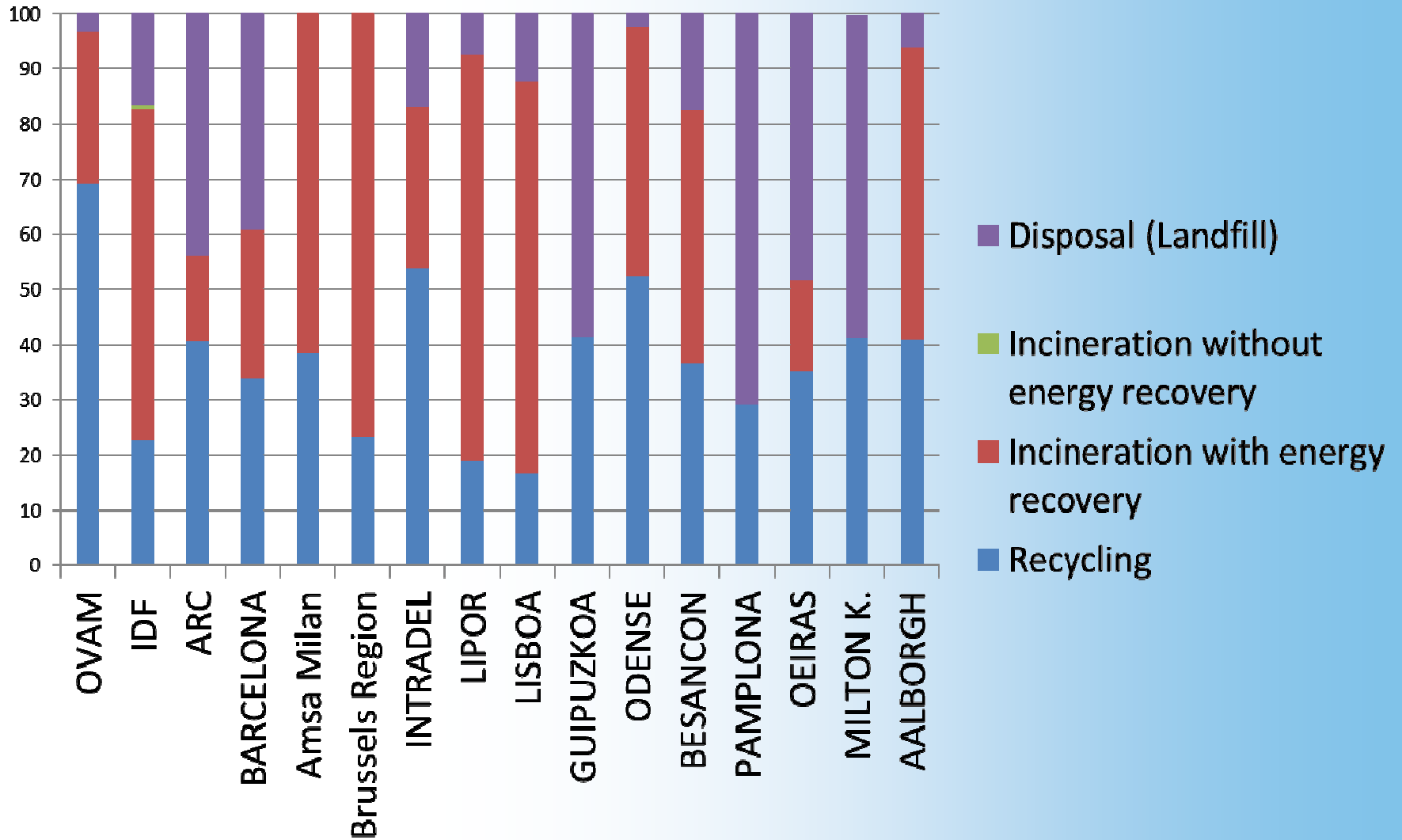
Selective Collection Rate (%)







# Waste Treatment (%)





# Key Questions

- 1. What are the main results based on Observatory work in 2011 (feedback from the 3 working groups)
  
- 2. What are the main challenges that we will need to overcome for better data interpretation at a regional/local level?
  
- 3. What are the new trends concerning good practices for selective collection and recycling?

# Conclusions

- Municipal Solid Waste: In most cases is represented by:
  - ▶ Household waste + 'similar waste'
    - « Similar » waste : undefined
  
- Packaging vs non-packaging waste. Need to aggregate data (as in some cases no distinction)
  
- Need to clarify regional targets for each municipality ( i.e. have they set up targets to reduce residual waste to 150 kg/hh/yr)
  
- Better knowledge of waste flows:
  - ▶ % collected for recycling
  - ▶ % of final destination



# Proposal of next steps

Dec 2011: 1st Working Paper on the Observatory

## Jan – Dec 2012

- Publish the 1<sup>st</sup> ACR European Observatory report
- Deliver workshop on 'ACR+ European Municipal Waste Recycling Barometer for LRAs' (data collection / improvement and/or good practices)
- Proposal for an annual Launch a campaign to collect further data by other municipalities and expand the Observatory work beyond the ACR+ members.



# Proposal of next steps

- Set up specific “**selective collection**” **targets** for biowaste and the main recyclables (paper, glass, plastic, metal, WEEE) by 2014.
- Introduce the concept ‘*Source separation could lead to higher recycling efficiencies and help to meet 50% target*’.
- Introduce the concept of **variable targets** in relationship with at least 2-3 different local areas.
- Introduce as a **measurement tool**: ‘Household Waste’ in order for regions and cities to meet their target, apply benchmarking and reach high recycling performances.



THANK YOU

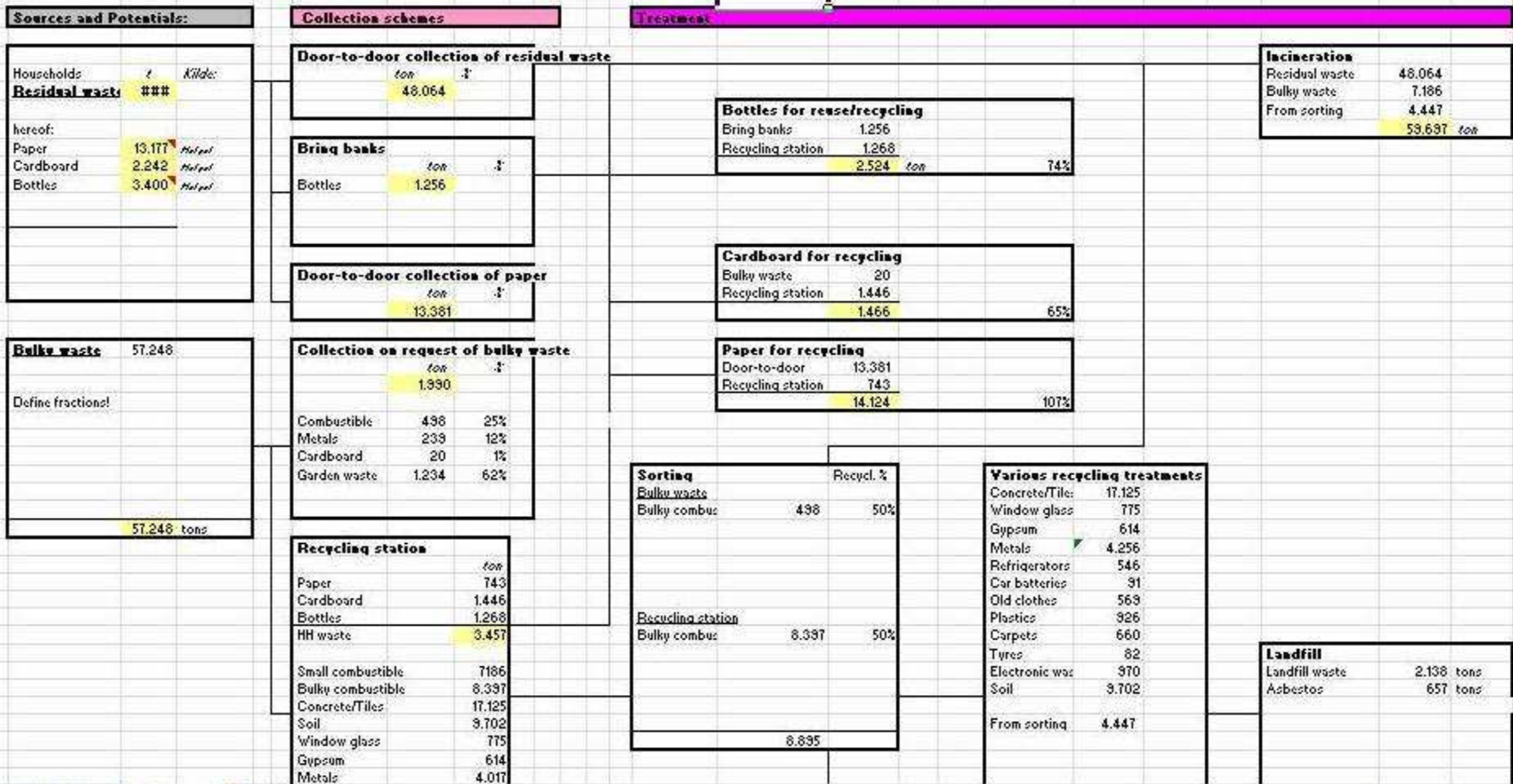


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# Example: Waste Stream Model ODENSE ( DK )

Waste Stream Model  
Odense Waste Management Company, Waste Collection Schemes in 2006

Flow diagram

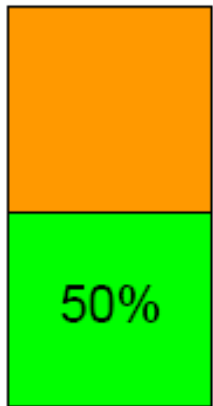




# Waste Recycling: European Legal Obligations

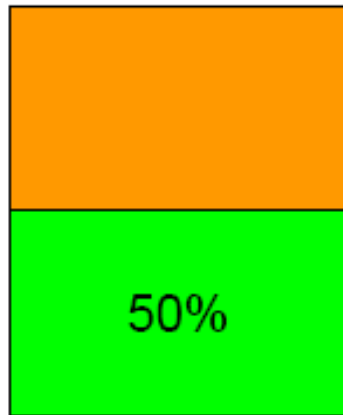
## WHAT IS THE EU RECYCLING TARGET?

minimum of  
overall



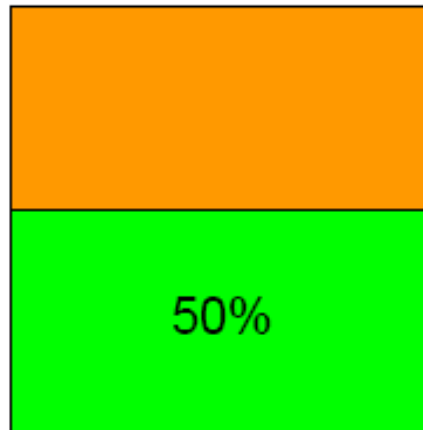
paper,  
glass,  
metal,  
plastic

minimum of  
overall



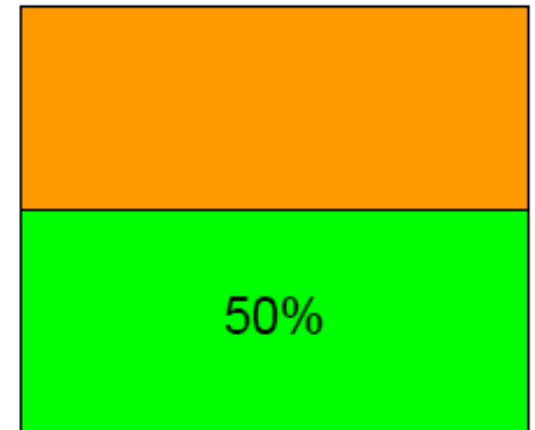
paper, +  
glass, other  
metal, household  
plastic or similar  
waste  
streams

minimum of  
overall



all household waste

minimum of  
overall



All waste from  
households +  
all similar waste  
streams =  
all municipal waste