



# GOOD PRACTICE

# ODENSE:

# Paper Collection

October 2014



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## 1. GENERAL INFORMATION ON THE GOOD PRACTICE (GP)

### 1.1 General information

Region	Odense
Country	Denmark
Short name of the good practice	Door-to-door collection of paper
Geographical level of implementation (country, region, municipality...)	Municipality
Target group	All citizens in the municipality
Date of implementation/duration	10 years
Waste stream (and subcategory)	Paper (not cardboard)
Legal framework	National Waste Act and municipal bye law (regulation)
Main local instruments involved	
Scale (pilot/partially roll out /roll out)	Roll out in 2003-2004
Initiator/coordinator	Odense Waste Management Company

### 1.2 Context

For many years there has been a collection of paper. Scouts have earned some money for collecting old newspapers more or less systematically. In the early 90'ties it was made compulsory for the Danish municipalities to collect paper. In Odense, the first system consisted of appr. 250 bring banks around the city and paper containers at the civic amenity sites. Around 2000 the Danish government declared a more ambitious collection efficiency for paper. After some initial pilot projects it was decided to roll out a door-to-door collection system over all Odense.

### 1.3 Short description

All paper bins (and paper containers) are collected at the households every four weeks. The collection is coordinated with the collection of residual household waste, so that the collection is always on the same day. One-chamber bins were preferred to multi-chamber bins, as multi-chamber bins require technically complicated collection trucks and logistics (the same truck must go to several treatment plants to unload).

## 1.4 Objective

The objective of the door-to-door paper collection is to offer an easy way for the citizens to get rid of their paper waste, and thereby increase the recycling percentage.

## 1.5 Method used to identify the good practice

The amount of collected paper has been registered during all the years before and after the introduction of the door-to-door collection of paper, and it is easy to see the dramatic rise in the collected quantities as well as the move from the civic amenity sites to the kerbside collection. The fall in amounts due to the financial crisis in 2008 would hit any collection system in the period.

## 1.6 General characteristics of the region

Demography	
Population	193 500
Number of households	93 500
Area (km <sup>2</sup> )	305.6
Population density (number of inhabitants/km <sup>2</sup> )	633
General waste data (Not necessarily related to the GP but to give some background information. Data about the GP should be included under 3.1)	
Year of the following waste data	2011
Sum of all waste streams excl. residual & bulky waste (kg/inhabitant/year) (Use indicator 1 or 2 from the R4R Online Tool)	256.72
Residual waste (including sorting residues) (kg/inhabitant/year) (Use indicator 8 or 9 from the R4R Online Tool)	259.07
Total waste (add up the previous two)	515.79
Sum of all waste streams excl. residual & bulky waste to DREC (kg/inhabitant/year) (Use indicator 3 of the R4R Online Tool)	256.72

## 1.7 External factors

A more ambitious Danish National Waste Law was adopted around 2000, obliging the municipalities to set up more efficient paper collection systems. However, there was freedom of method, i.e. the Danish State did not order one specific collection system for all municipalities.

## 2. IMPLEMENTATION

### 2.1 Preparation phase

In Odense, the first system consisted of appr. 250 bring banks around the city and paper containers at the civic amenity sites. Around 2000 the Danish government declared a more ambitious collection efficiency for paper. After some initial pilot projects it was decided to roll out a door-to-door collection system over all Odense.

### 2.2 Technical implementation

Wheely bins and minicontainers (130 l, 190 l, and 600 l volume) were purchased, together with a number of paper waste collection trucks. It is important not to choose too big containers. Otherwise there will be handling problems, as the containers tend to be very heavy and/or unstable. Therefore Odense decided to opt out the 240 l bin and the 400 l and 800 l minicontainers.

The bins and minicontainers are situated at the households (houses and apartments), and they are collected every four weeks. The collection frequency can be extended even more (to e.g. every six weeks), as paper does not rot like biowaste.

### 2.3 Communicative implementation

Media: Annual waste handbook, website

### 2.4 Organisations involved

Operation: Is laid in the hands of OWMC (The Collection Dept.)

Information: is laid in the hands of OWMC (The Communication Dept.)

Legal framework: The Municipality has adopted a bye law (regulation) under the National Waste Act, where rights and obligations are established.

## 2.5 Key success factors

Success = Infrastructure (the bins and trucks) + information about the system + motivation (awareness raising)

Infrastructure: The necessary collection equipment must be there, so it is easy for the citizens to use the system. It is also important to have a paper treatment plant not too far away.

Information: Communication must be two-sided: Both inform objectively about the system as it is and works, and communicate environmental attitudes to convince people about the advantages (better environment and (perhaps) lower costs) of correct sorting and treatment.

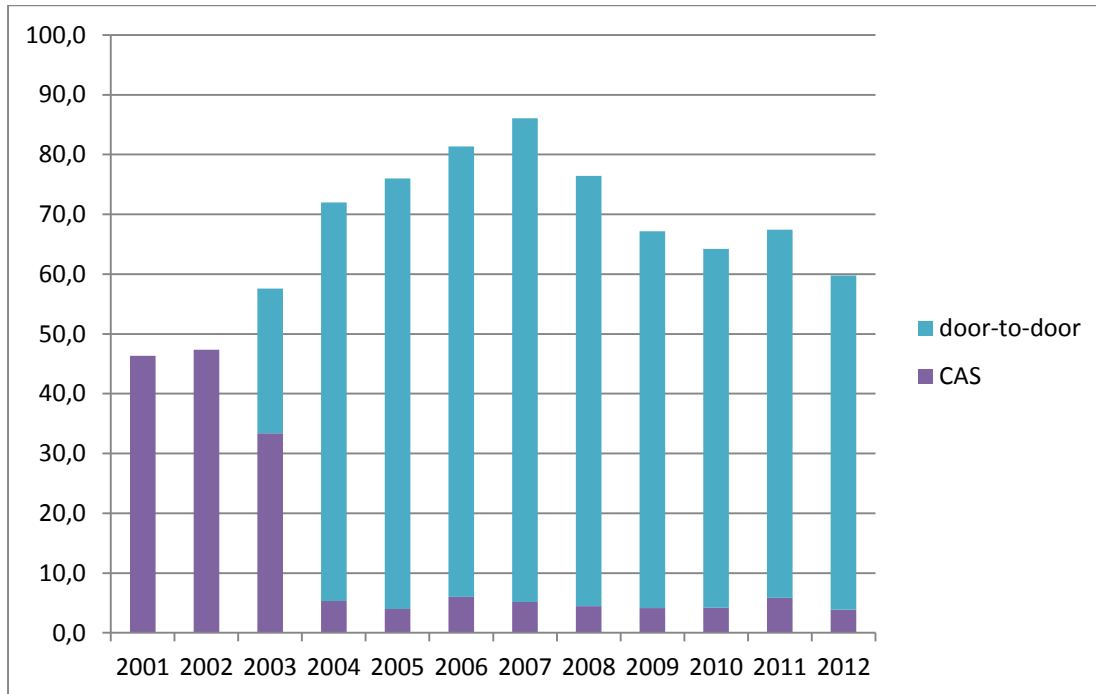
## 2.6 Resources

The paper collection is financed by a part of the general household waste fee paid by all households in the municipality and is approx. 7.5 Euro (gross value) per inhabitant per year. The value of the paper covers a percentage of this total operation cost (from approx. 30% when prices were lowest, up to 80% when prices are high). So what the citizen actually pays is more like 5.25 – 1.50 Euro per year.

# 3. RESULTS

## 3.1 Monitoring of the progress of the GP

Table. Paper collected in Odense, first via Civic Amenity Sites only, and later also through a door-to-door collection scheme. All numbers are kg/year/inhabitant



The table shows how the introduction of the door-to-door collection scheme has two clear consequences: The amounts of collected paper goes up, and the door-to-door collection exterminates the Civic Amenity Sites almost totally. The financial crisis since 2008 is also clearly reflected.

### 3.2 Other results

Every year the OWMC makes a general customer satisfaction survey on all the waste services, including the door-to-door collection of paper waste. In general, the citizens are very satisfied with the system and have few complaints. The main wish from the citizens is to be able also to put cardboard and carton in the paper bin.

## 4. LESSONS LEARNED

### 4.1 Negative effects

Some people put residual waste in the paper bin, because their residual bin is full. This must be put to an end as quickly as possible. When a paper bin is “contaminated” with other types of waste, it is not collected, before the citizen has removed the contamination.

## 4.2 Challenges

When paper is collected, the municipality must decide whether cardboard is allowed in the paper or not. In Odense, cardboard is not allowed, but in practice we have to accept small amounts of carton in the paper (but not corrugated cardboard). Cardboard is to be delivered at the Civic Amenity Sites.

## 5. PICTURES AND OTHER DOCUMENTATION



At all households in Odense there are two bins – one for residual waste (to the left with the green lid) and one for paper (to the right with the grey lid). The residual bin is collected every two weeks, and the paper bin is collected every four weeks.

## 6. FURTHER INFORMATION

Organisation	Odense Waste Management Company
Address	Snapindvej 21
Contact person	Mr. Claus Hammerich
Phone	+45 63 13 82 05
E-mail address	cs@odenserenovation.dk
Website	<a href="http://www.odenserenovation.dk">www.odenserenovation.dk</a> (in Danish) <a href="http://www.odensewaste.com">www.odensewaste.com</a> (in English)
Others	



## 7. OTHER REGIONS WITH SIMILAR GOOD PRACTICES

The following partners of the R4R-project have a good practice similar to the good practice described in this factsheet:

Organisation	Municipality of Lisbon
Address	Rua da Boavista, nº 9, 1200-066 Lisbon PORTUGAL
Region	Lisbon
Country	Portugal
Contact person:	Celeste São João / Lúcia Melo
Phone	00351 213 253 584 / 443
E-mail address	<a href="mailto:celeste.joao@cm-lisboa.pt">celeste.joao@cm-lisboa.pt</a> ; <a href="mailto:lucia.melo@cm-lisboa.pt">lucia.melo@cm-lisboa.pt</a>
Website	<a href="http://www.cm-lisboa.pt/viver/higiene-urbana/recolha-de-residuos">http://www.cm-lisboa.pt/viver/higiene-urbana/recolha-de-residuos</a>
Others	
Short description of the main differences.	In the downtown Lisbon's area, the paper, cardboard and carton are collected door to door six times per week (from Monday until Saturday) in all the commercial activities. This type of collection is performed in areas with narrow streets and where there is a high density of commercial activities. Small electric vehicles are used in this type of collection. On the other hand, in the most part of the city, the municipality assures as well the door to door collection of paper, for households, once a week, and also for the economic activities, from one until six times per week.

Organisation	Public Flemish Waste Agency (OVAM)
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Address	Stationsstraat 110 2800 Mechelen Belgium
Region	Flanders
Country	Belgium
Contact person:	Maarten De Groof
Phone	+32 15 284 284
E-mail address	info@ovam.be
Website	<a href="http://www.ovam.be">www.ovam.be</a>
Others	
Short description of the main differences.	This good practice is at certain level similar to the monthly door-to-door (DtD) collection of paper in Flanders. Differences are: collection of cardboard and paper waste together In Flanders, no specific bins/containers are available for the DtD collection of paper & cardboard waste, citizens use carton boxes and paper bags, paper and cardboard collection is for free in Flanders.

# REGIONS FOR RECYCLING

