

Use and Utilization of Carrier Bags and Vest Carrier Bags for Service Counter Goods in Germany

BKV Beteiligungs- und Kunststoffverwertungsgesellschaft mbH
IK Industrievereinigung Kunststoffverpackungen e.V.
Handelsverband Deutschland - HDE e.V. - Der Einzelhandel

GVM Gesellschaft für Verpackungsmarktforschung mbH

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Subject and Aim of the Study

- Aim of this study is to determine the consumption of carrier bags and vest carrier bags for service-counter goods in Germany.
- For plastic bags and vest carrier bags for service-counter goods the study will additionally assess the share of bags in circulation which were produced in Germany as well as the share of bags exported and imported.
- In addition to that, the study will calculate a collection and recovery rate for plastic bags. This is only possible by means of a sorting analysis.
- The study has been designed in cooperation with the German Association for Plastics Packagings and Films (Industrieverband Kunststoffverpackungen, IK), the German Retail Federation (Handelsverband Deutschland, HDE) and the platform for plastics and recovery (BKV Beteiligungs- und Kunststoffverwertungsgesellschaft).

Defining the Object of Investigation

- The study is based on the following **definition for carrier bags**:
 - Carrier bags are bags generally used to transport items from retail locations to the place of consumption.
 - Carrier bags have handles either in form of a strap, punching or similar.
 - Carrier bags are dispensed to the end consumer at the checkout.

- The object of investigation has been defined to be the following:
 - The study looks at both carrier bags dispensed by retail for a small fee as well as free carrier bags.
 - Bags not dispensed at the checkout are considered to be **vest carrier bags for service-counter goods**, not carrier bags.
 - The study does not consider premium carrier bags designed for multi-use. Those are not subject of the investigation.
 - The study focusses on plastic carrier bags; carrier bags made from biopolymers are not reported separately.

Defining the Object of Investigation

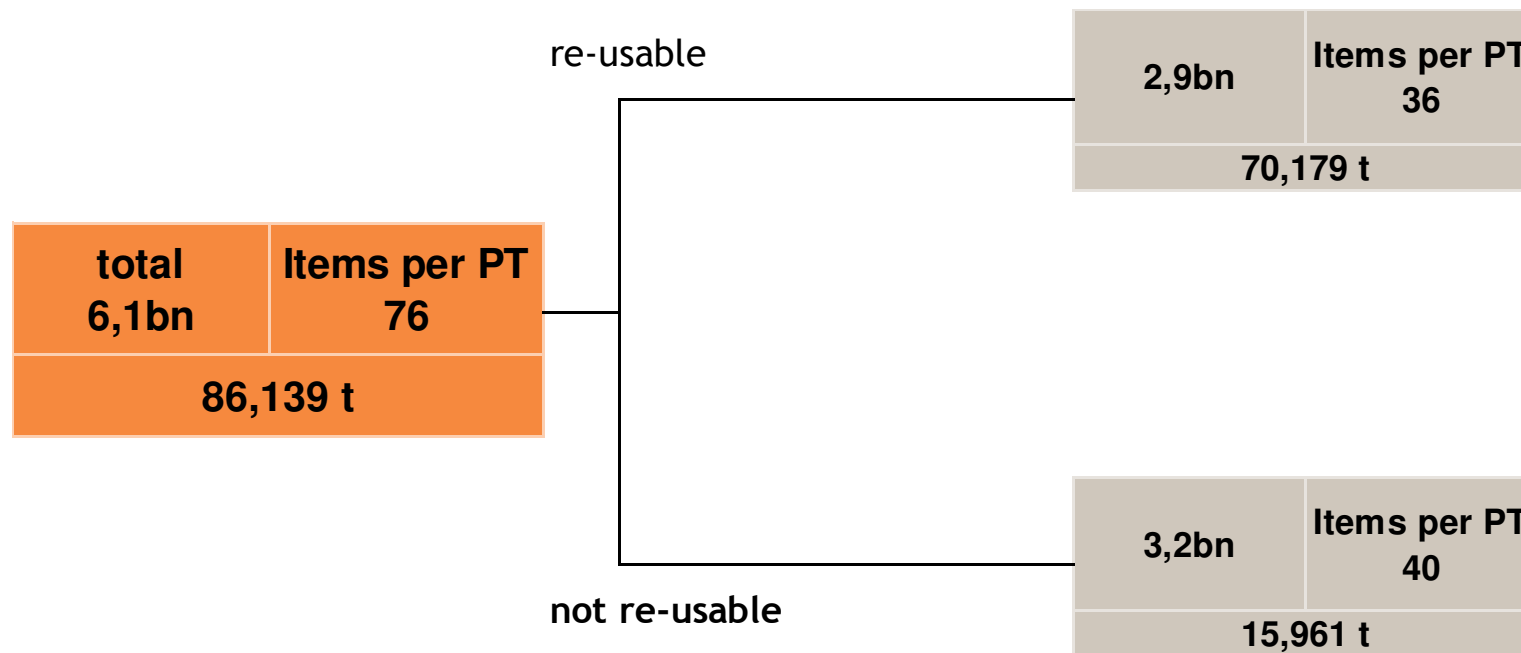


Overview of the Study's Approach

1. Evaluation of GVM database for market quantity and packaging samples
2. Research, processing and analysis of available data as regards distribution structures in Germany
3. Postal and phone interviews with retail companies
4. Analysis of sample handle bags
5. Store checks assessing prevalent handle bag formats and types in retail
6. Personal Interviews with branch managers and sales staff
7. Evaluation and preparation of results

Results Market Quantity - Carrier Bags

- In 2012, German retail dispensed 6.1 billion plastic carrier bags. Thereof 52 % cannot be re-used, especially small carrier bags (chemist, etc.).



Plastic carrier bags

Population Germany 2012
according to the Fed. Stat.
Office 80,412,762

Rounded figures

total 3,1bn	Items per PT 39
8,675 t	

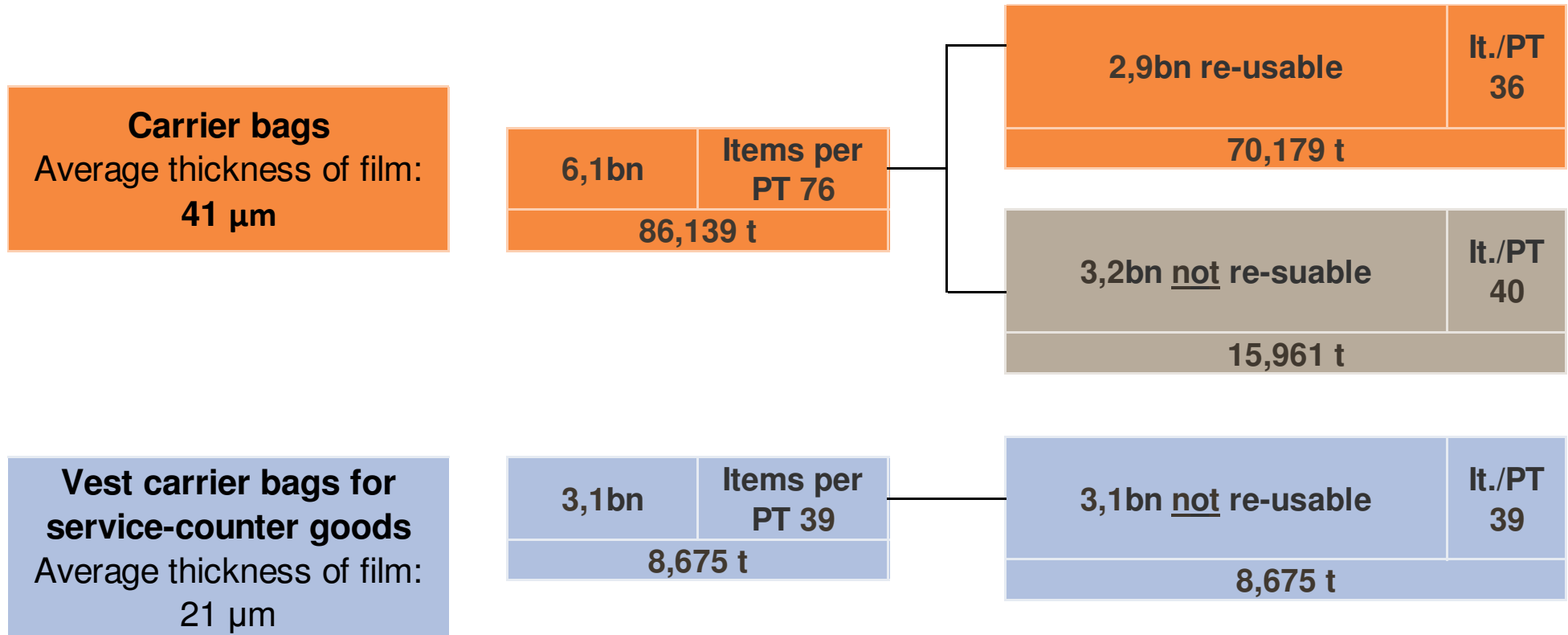
Vest carrier bags for counter service goods

- In 2012, German retail dispensed **3.1 billion vest carrier bags for service-counter goods** which usually aren't suitable for re-use.
- Vest carrier bags are mainly used for foods, thus are rarely used in non-food distribution.

Population Germany 2012
according to the Fed. Stat.
Office: 80,412,762

Rounded figures

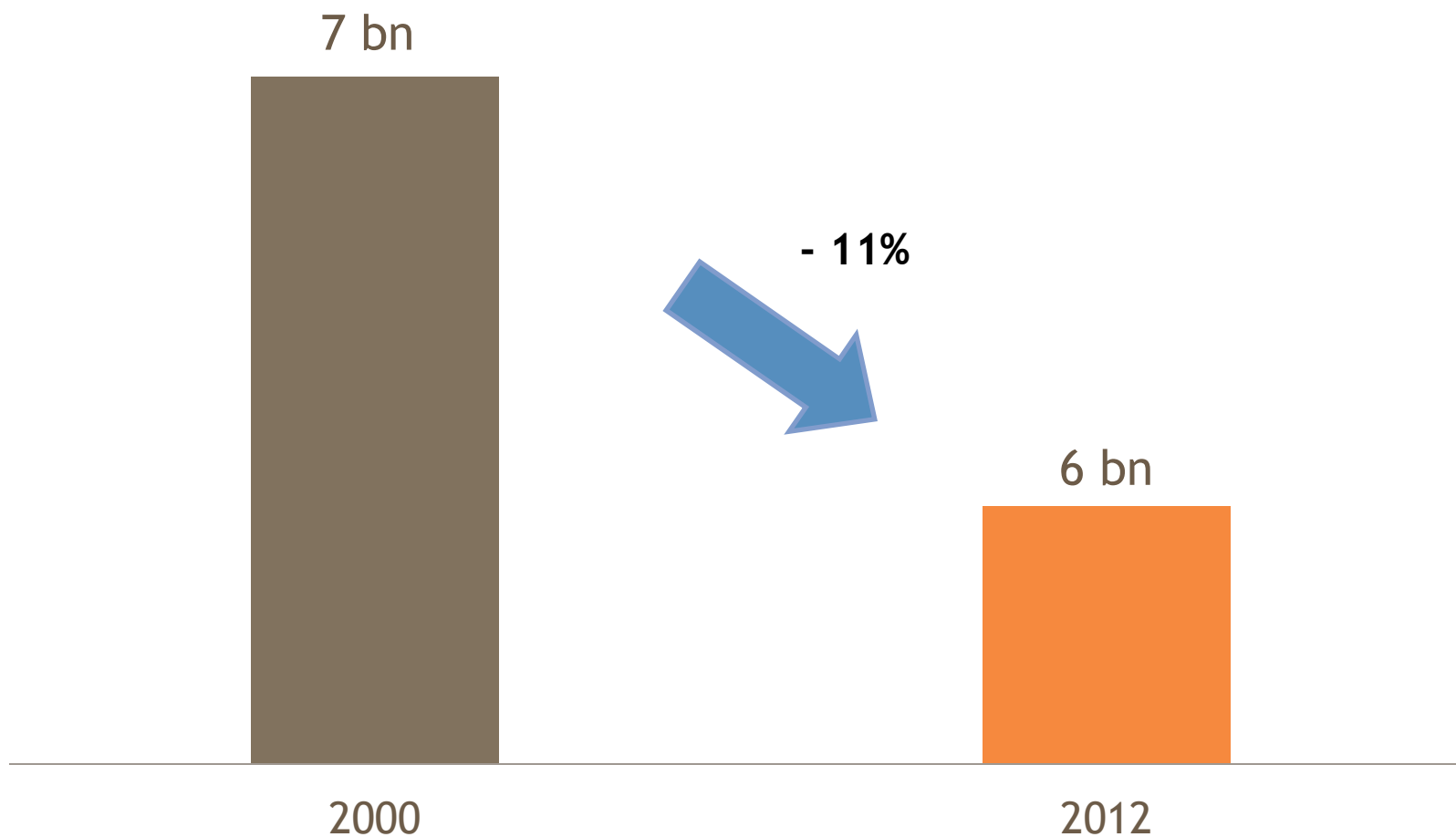
Results Market Quantity



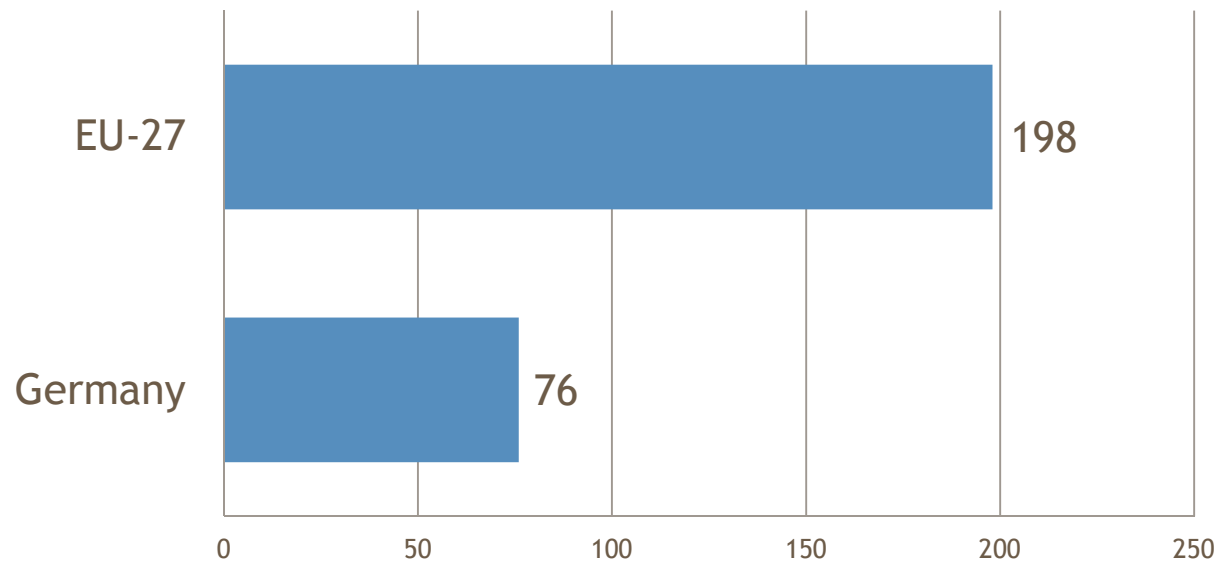
Population Germany 2012
according to the Fed. Stat.
Office: 80,412,762

Rounded figures

Consumption development of plastic carrier bags in Germany

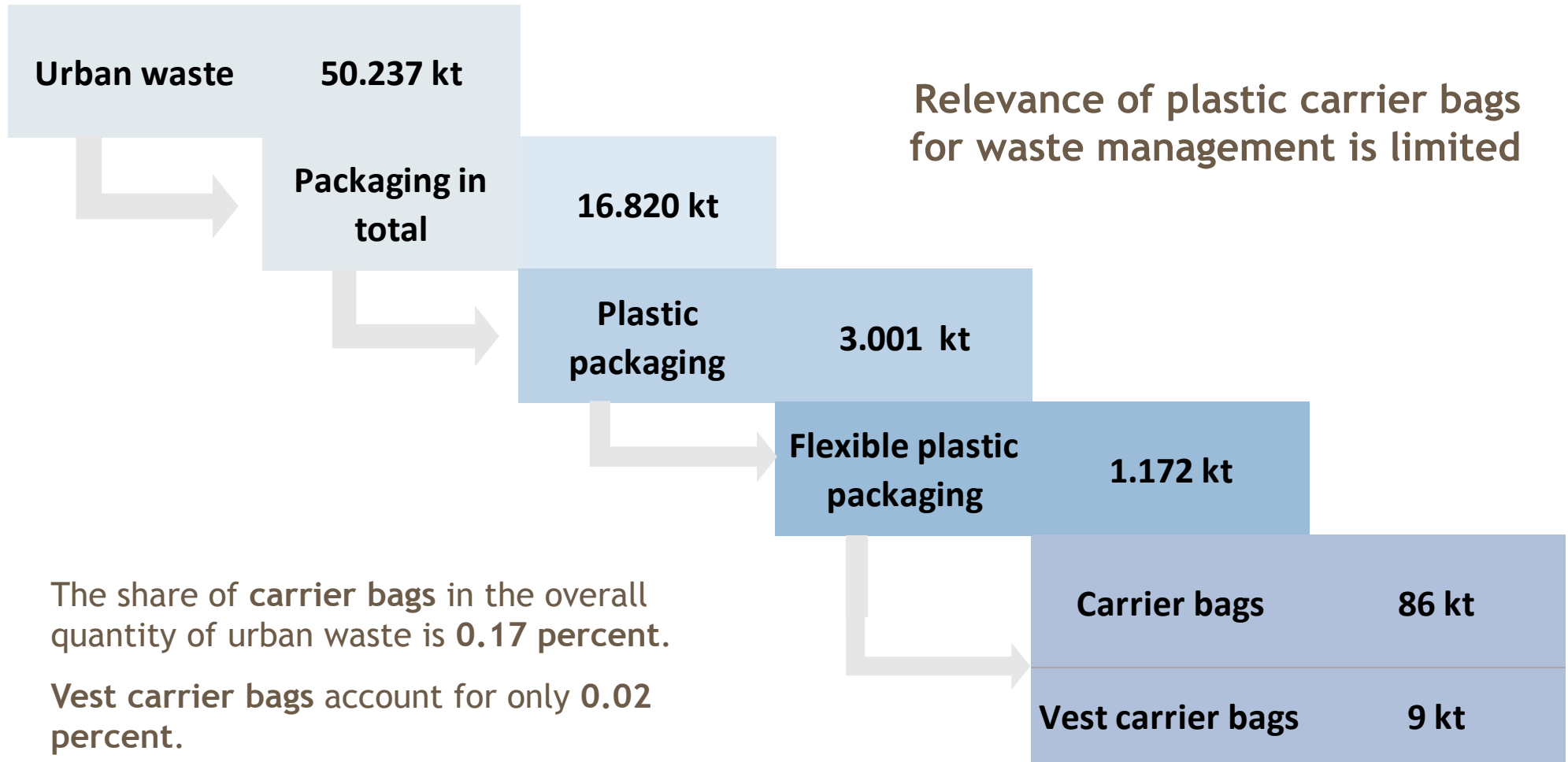


Per capita consumption of carrier bags in comparison to the EU average



Source for EU-27: EU-Commission Staff Working Document Impact Assessment - Accompanying the document Proposal for a directive of the European parliament and of the council amending Directive 94/62/EC on packaging and packaging waste to reduce the consumption of lightweight plastic carrier bags (05 Nov. 2013)

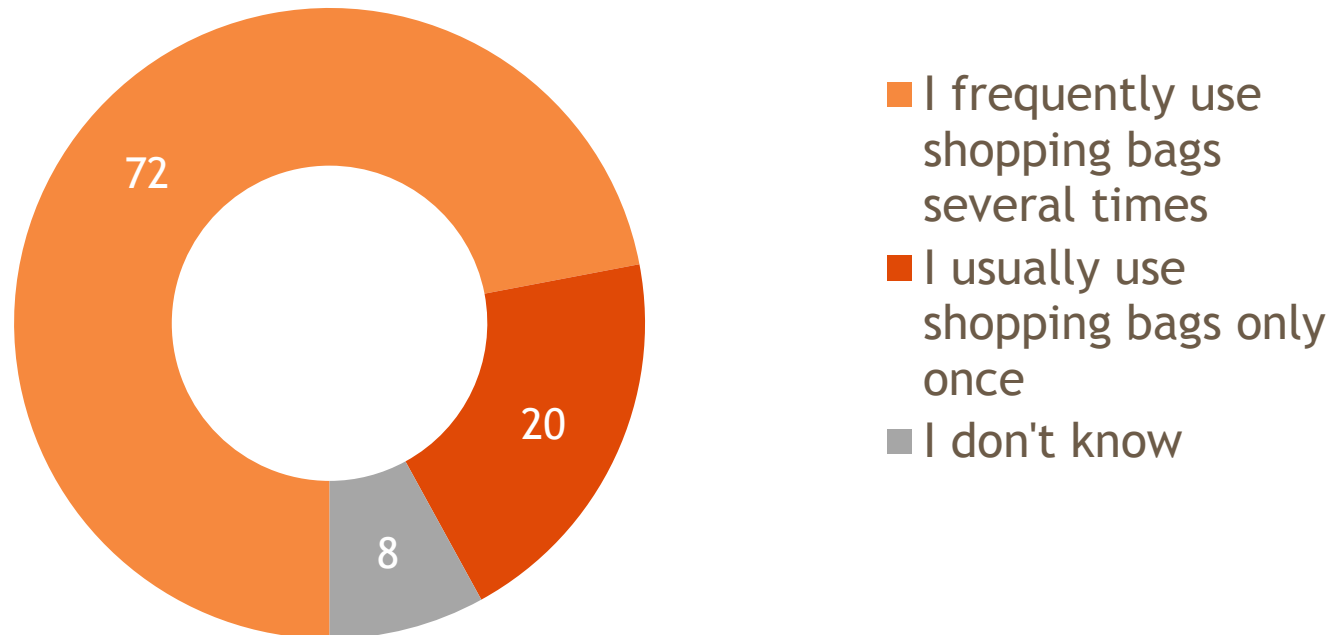
Waste Management Relevance



Sources: Destatis "Waste Balance" 2011; GVM

Re-using Carrier Bags

- The media and social research company TNS Emnid published a survey on carrier bags in December 2012
- The result clearly shows: “The majority uses carrier bags several times“



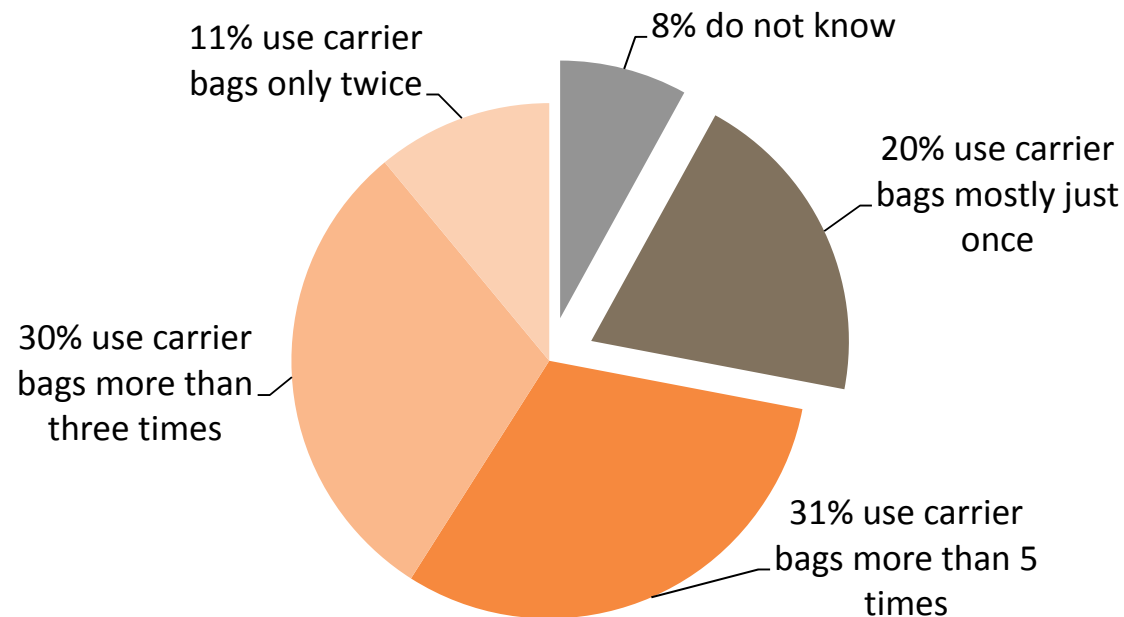
Question: How often do you usually use shopping bags?
Base: 1,006 interviewees

Source: TNS Emnid and IPV industrial association paper and film packaging - Study on shopping bags, Dec. 2012

Note: “shopping bag“ here is synonymously used with the term carrier bag. Vest carrier bags are generally used only once.

Re-using Carrier Bags

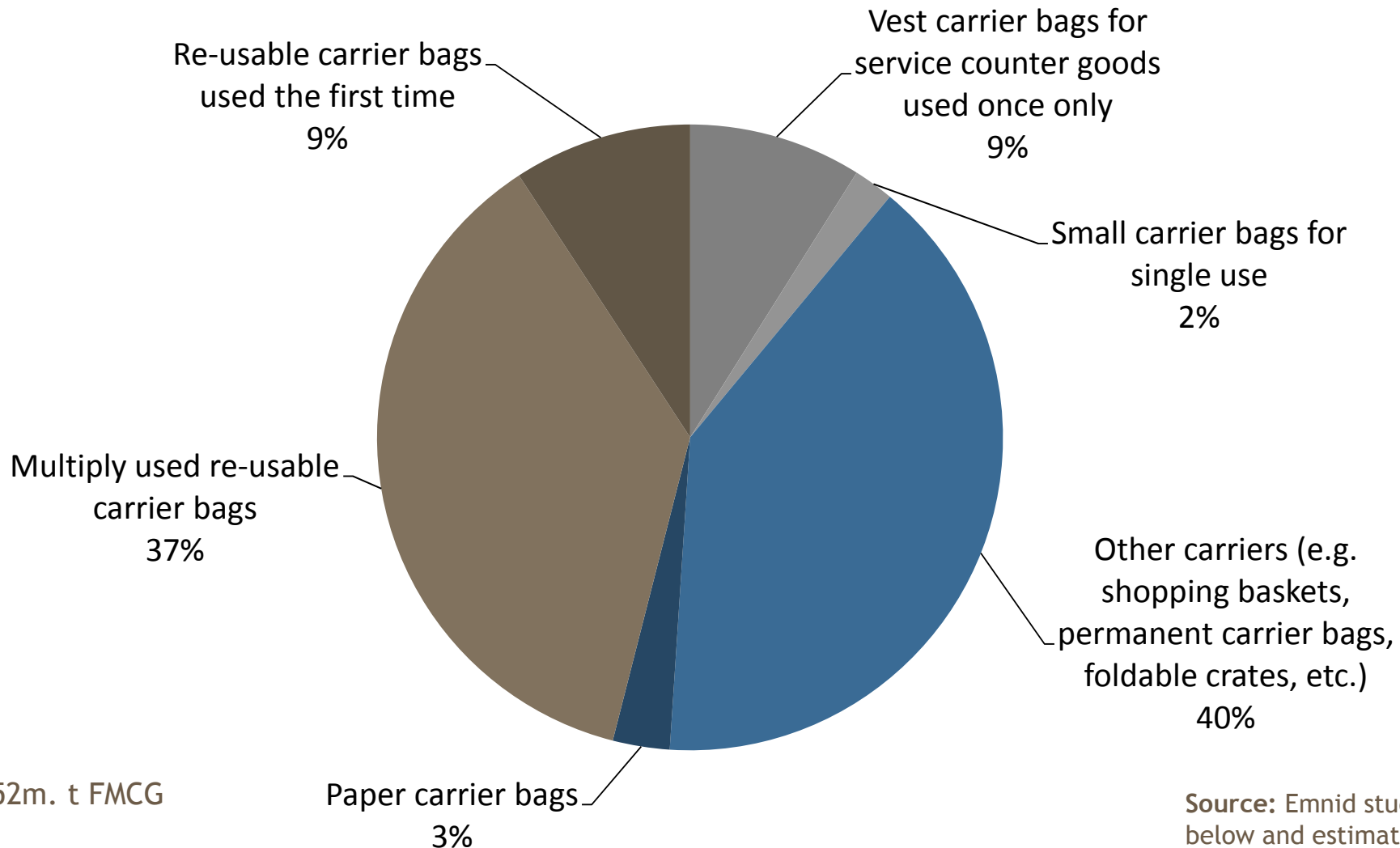
- 85 % of the interviewees using carrier bags several times, stated that they are using carrier bags three times on average; more than half of the interviewees stated to use carrier bags even more than five times.



- The „last“ use of carrier bags is often the use as a waste bag. This inevitably leads to a reduction of the recycling quote and an increase in energy recovery.

How Does the End Consumer Transport?

Use of carriers for food and drugstore goods



Basis: 52m. t FMCG

Source: Emnid study, see below and estimates by GVM

- In Germany, 6.1 billion plastic bags were put in circulation in 2012. This corresponds to a tonnage of 86 kt or a quantity of 76 carrier bags per capita annually.
- Thereof
 - 2.9 bn carrier bags are suitable for re-use
 - further 3.2 bn carrier bags are usually not suitable for re-use.
- Additionally, in Germany, 3.1 billion vest carrier bags for service counter goods were put into circulation, mainly at the service counters in retailers' fruit and vegetable departments.
- In long-term view, the consumption of carrier bags in Germany is declining.
- The re-use of carrier bags in Germany is not uncommon and happens on a regular basis. Only 11 % of the fast-moving consumer goods (FMCG) distributed through retail are taken home by the end consumer in plastic carrier bags used for the first time.

- The relevance of plastic carrier bags for waste management is very small. The bags' share of the overall urban waste is only 0.17 %; thereof, 0.03 % are dedicated to plastic carrier bags not suitable for re-use.
- The final use of plastic carrier bags as waste bags occurs on a considerable scale. Carrier bags, in comparison to other packaging films of comparable size, thus end up more often in residual waste.

Conclusion

- The attention devoted to carrier bags by EU resource policies and the German media is mainly due to the problems posed by littering and marine littering in other European countries. Causes for this are mainly consumer conduct and inadequate waste disposal structures.
- Carrier bags have a 3 % share of the overall consumption of plastic packaging (8 % in the overall consumption of flexible plastic packaging). This comparison illustrates the very limited relevance of carrier bags to waste management in Germany.
- In Germany, both retail and end consumers use carrier bags predominantly in a responsible manner. Carrier bags are used modestly and are often used several times.
- The German per-capita consumption of carrier bags is considerably lower than the European average.
- The German system of the recycling and disposal of packaging successfully ensures that plastic bags are conveyed to mechanical recycling and energy recovery after usage.

Conclusion

- A steering intervention to the disadvantage of plastic carrier bags with a film thickness of $< 50\mu$ could also have undesirable avoidance reactions, such as switching to carrier bags with a higher wall thickness.
- The German food retailing industry pledged not to provide consumers with carrier bags free of charge (“bag penny“) already 40 years ago, thereby setting a highly effective signal for product responsibility.
- The fact that food retail dispenses carrier bags for a fee led to end consumers attaching greater value to carrier bags. The final use of bags as waste bags is also a consequence of this perception of value.

Appendix

- The study is based on the following definition of **vest carrier bags for service-counter goods**:
 - Vest carrier bags for service-counter goods are all bags filled directly by the sales staff and dispensed to the customer as well as bags filled by the customers themselves and brought to the checkout.
 - Vest carrier bags for service-counter goods are not dispensed at the checkout but usually filled before going to the checkout.
 - Vest carrier bags for service-counter goods have two long carrying straps to fasten and close the bag by knotting the handles.

- In this study these bags are considered in addition to carrier bags as vest carrier bags are similar in size and film thickness to those of small carrier bags.

Appendix

Samples - Selection of Results

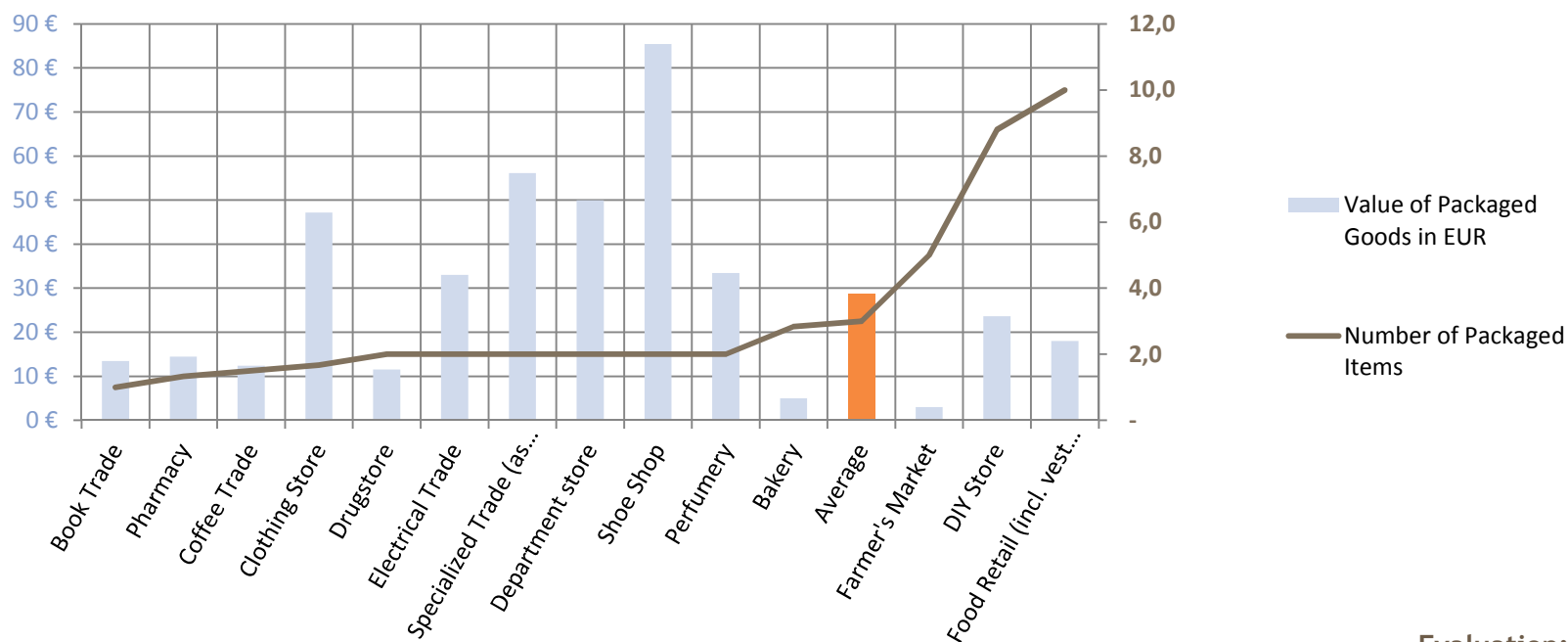
Distribution Channel	Weight in g	Thickness in µm	Re-Use
Pharmacy, Berlin	1.31	13.0	not suitable for re-use
Food Retail (traditional)	2.20	9.1	
Pharmacy, Mainz	2.45	16.1	
DIY Store	3.05	17.2	
Pharmacy, Mainz	3.07	27.0	
Food Retail (fruit & veg)	3.34	9.2	
Pharmacy, Mainz	3.35	28.2	
Drugstore	3.74	22.9	
Cobbler's shop (specialized)	4.94	17.2	
Pharmacy, Neu-Isenburg	5.20	43.2	
Clothing Store	5.22	63.1	
Pharmacy (chain)	5.50	34.1	
Farmer's Market	5.83	17.0	
Coffee Trade	6.22	31.3	
Book Trade	6.73	38.5	
Food Retail	6.84	14.9	
Book Trade, regional	7.32	44.8	
Bakery	8.33	29.8	
Food Retail, Butchery	8.52	24.0	
Bakery (chain)	9.01	27.8	
Perfumery	9.36	55.0	
Souvenirs (specialized trade)	9.39	48.9	
Perfumery	9.58	72.4	

Distribution Channel	Weight in g	Thickness in µm	Re-Use
Bakery (chain)	10.18	36.6	limited suitability for re-use
Bakery	10.27	27.8	
Food Retail (specialized trade)	10.45	40.9	
Trade for coffee and bakery products	13.21	45.3	suitable for re-use
DIY Store	14.81	37.7	
Food Retail (traditional)	15.05	44.6	
Clothing Store	15.90	49.3	
Department Store	16.63	48.2	
Shoe Shop	17.01	51.3	
Food Retail (traditional)	17.02	44.1	
Electrical Trade	17.73	59.6	
Shoe Shop	18.00	61.7	
DIY Store	18.61	56.3	
Clothing Store	19.45	59.0	
Food Retail, Discounter	19.56	46.3	
Food Retail (traditional)	22.30	55.2	
Shoe Shop	24.10	68.1	
DIY Store	24.41	45.3	
Food Retail (traditional)	24.75	58.9	
Clothing Store	25.66	63.3	
Coffee Trade	26.47	43.9	
Food Retail, Discounter	29.56	66.1	
DIY Store	29.69	30.8	
Department Store	30.90	57.7	
Shoe Shop	43.43	59.1	
Electrical Trade	50.71	52.9	
Clothing Store	89.08	127.9	

Appendix

Number of Articles per Carrier Bag

- Purchase amount and number of articles per carrier bag are only slightly connected. Example:
- An average of 2 articles costing 45 € is transported in a carrier bag from a clothing shop, while a bag from the DIY store carries 9 articles to the value of less than 25 €.



Evaluation: Store Check
GVM, May - Sept. 2013

Suitability of the 50µ Criteria

Typical vest carrier bags for fruit and vegetables	9 µm Min.
Small carrier bag used in pharmacies, book trade, coffee shops	20 µm
Typical flexi-loop carrier bag used in food retailing; suitable for re-use	40 µm
Typical flexi-loop carrier bag used in food retailing; suitable for re-use	50 µm
Typical carrier bag used in clothing stores, DIY stores and electrical trade	70 µm
	130 µm Max.

Abbreviation	Description
EU-27	27 member states of the European Union (June 2013)
PT	Population
FMCG	Fast Moving Consumer Goods
kt	kiloton
bn	billion
PE / PE-LD / PE-HD	Polyethylene / PE-LowDensity / PE-HighDensity
t	ton
µm	10 ⁻⁶ m, micron

Gesellschaft für Verpackungs-
marktforschung mbH
Alte Gärtnerei 1
D-55128 Mainz

Fon +49 (0) 6131.33673 0
Fax +49 (0) 6131.33673 50
info@gvmonline.de
www.gvmonline.de