

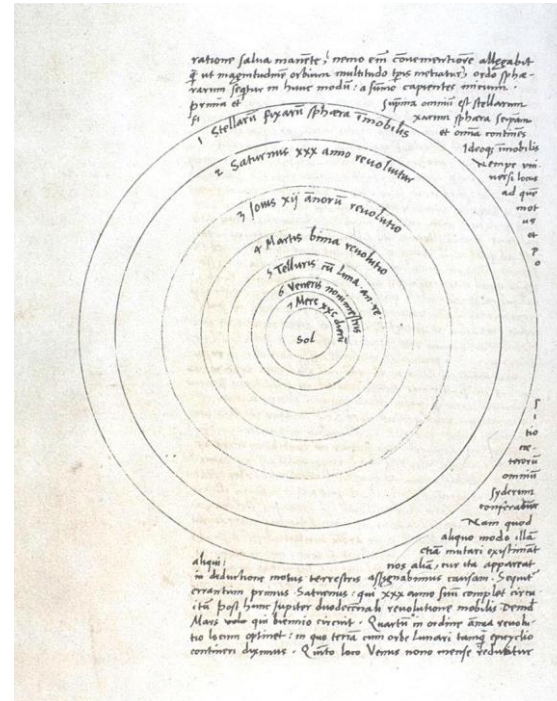
COLLECTORS

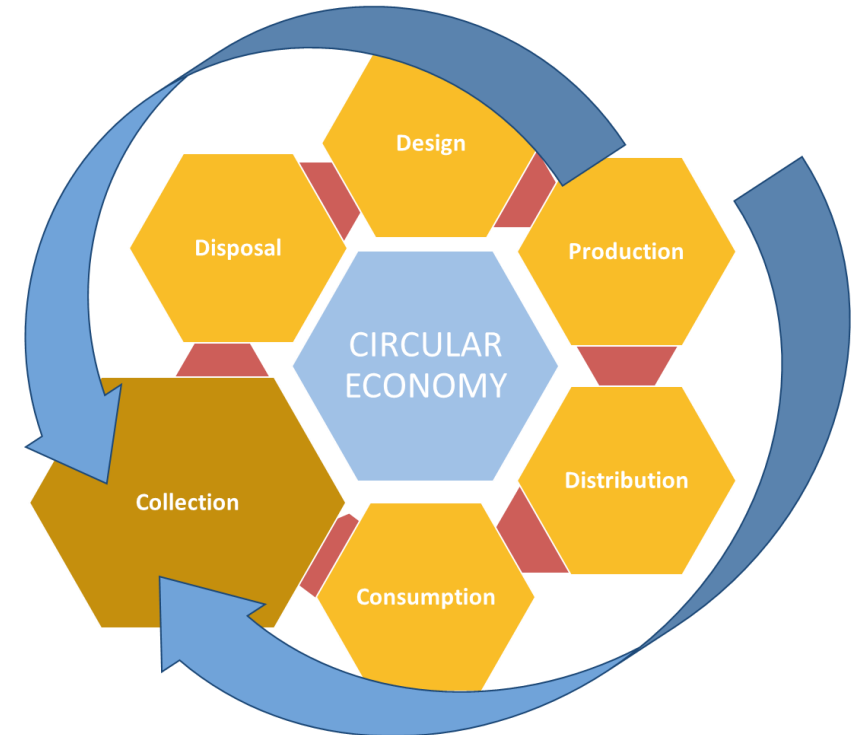
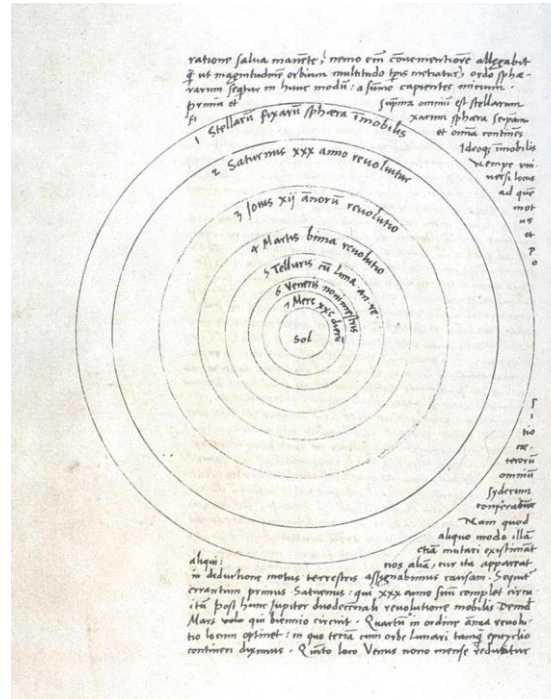
WASTE COLLECTION SYSTEMS ASSESSED AND GOOD PRACTICES IDENTIFIED

INTRODUCTION

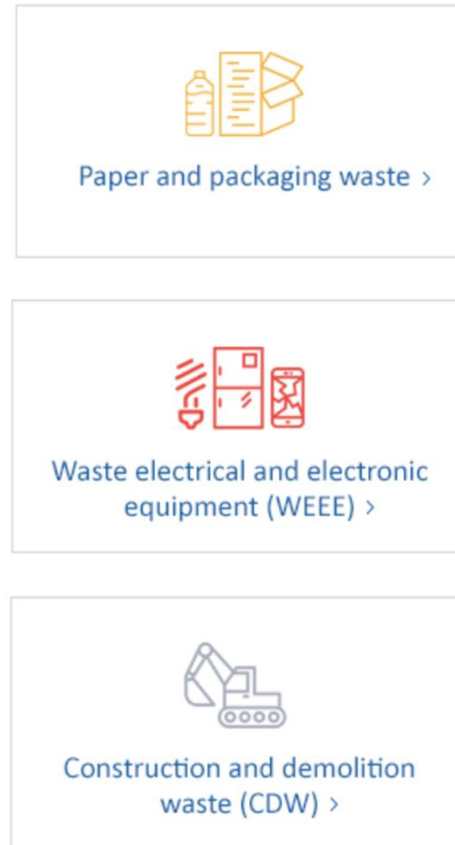
Warsaw, June 26th 2019

Tjerk Wardenaar, PhD
PNO Consultants





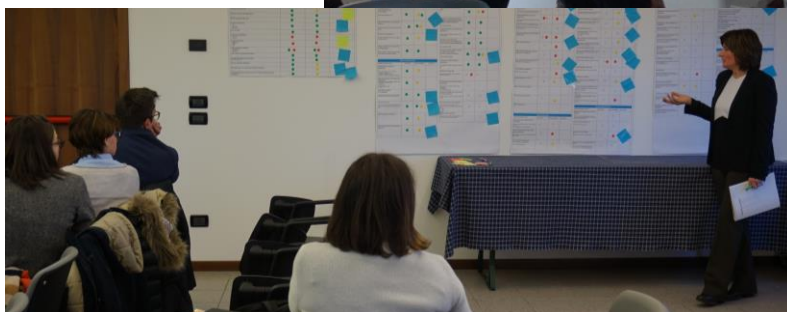
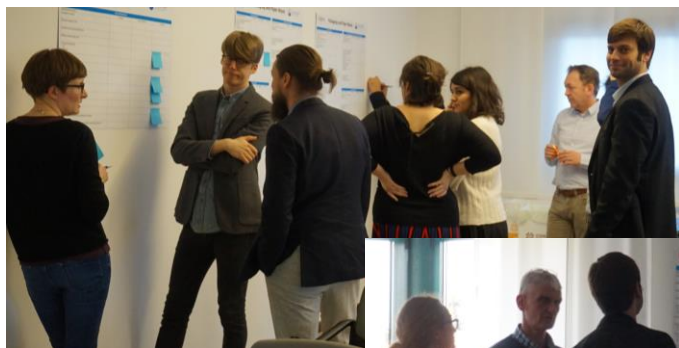
“The COLLECTORS-consortium is convinced that good performing regions and cities have the potential to serve as good practice examples for **regions with similar local contexts**”



Phase 1: inventory

Phase 2: assessment

Phase 3: implementation



Use the filter option to find sources with specific characteristics: specific language / country / waste stream / author / ...

Short ref.	Title	Date	Author/publisher	Country	Language	PPW	CDW	WEEE
2015, Ministry Of Environment, SI National	Program Waste Management and the years 2016 - 2026	2015	Ministry Of Environment SI	SI	English	X	X	X
2015, Ministerium für Klimaschutz, DE NRW	Abfallwirtschaftsplan Nordrhein-Westfalen - Teilplan Siedl	2015	Ministerium für Klim	DE	German	X	X	X
2015, Deloitte, BE CDW Factsheet	Screening template for Construction and Demolition Wast	2015	Deloitte	BE	English	--	X	--
2015, BiPRO, UK London Capital factsheet	Capital factsheet on separate collection - London, UK	2015	BiPRO	UK	English	X	--	--
2015, BiPRO, SK Bratislava Capital factsheet	Capital factsheet on separate collection - Bratislava, SK	2015	BiPRO	SK	English	X	--	--

You can find the respective documents by looking at Short ref., which is the file name of the document, and the waste stream.

Here you can find the files, which are listed in the literature database

Name	Uploaded By	Creation date	
Literature for CDW waste stream	tber@ramboll.com	17/05/2018 09:09:34	⚙
Literature for PPW waste stream	tber@ramboll.com	17/05/2018 09:09:49	⚙
Literature for WEEE waste stream	mdr@ramboll.com	16/05/2018 15:54:27	⚙
Task 1.2 Literature Database.xlsx	mdr@ramboll.com	16/05/2018 15:53:27	⚙

Literature Database – provides an overview of collected sources

CHARACTERISTIC OF THE REGION

Population

Density

GDP

Area characteristics
Please make a selection

Waste fraction

☐ PPW ☒ WEEE ☐ CDW

Plastic packaging waste ☐ Waste electrical and electronic equipment ☒ Construction and demolition waste ☐

AVAILABLE INFORMATION


only display waste collection systems with available data on

- ☐ Waste fee ☐ Information on the costs ☐ Quality of sorted material

SEARCH

71 waste collection systems found






The Project Results Tools Get Involved! News & Events Library Contact

LA RIOJA (ES)

Population: 315,381 inh.
Density: 62.5 inh./km²
GDP: 26,044 €/inh
Collected quantities of WEEE: 3.2 kg/inh
WEEE national generated quantities: 17.6 kg/inh

Map Satellite



DESCRIPTION OF THE WASTE COLLECTION SYSTEM

SCOPE OF WEEE COLLECTED

WEEE from household waste	Similar waste	Unclear	Other
x	x		

Additional comments: The municipality is responsible only of the WEEE from households. However, companies also perform door-to-door collection. This WEEE from companies is also included in the total WEEE. Responsibility of collection: it is carried out between the authorities, the producers of electronics (EPR) and a private company. The WEEE is collected by CAS and mobile collection. The WEEE collection system is carried out, in the case of households by the relevant authorities and by the companies selling WEEE, while the WEEE discarded by the industrial companies are delivered to authorized waste operators. The companies selling WEEE (distribution) withdraw the WEEE at the time of delivery of the new EEE, in addition they have containers for the citizens to deposit the WEEE in them. The system enabled by the authority consists of: 1) Small WEEE are delivered to the authorized CAS and collected via mobile collection point - Logroño (1 CAS and 2 mobile collection trucks) - Rest of La Rioja (1 mobile collection truck that goes from town to town (35 towns)) 2) The large WEEE (refrigerators, washing machines, ovens, ...) are delivered through the bulky waste collection system (regular periodical door to door and CAS)

COLLECTION MODE

	Non-retail bring points	Retail bring points	Civic amenity sites	Pick up on request	Other
Large appliances			11.0		
Small appliances			9.9		
Computer equipment, equipment telecommunications			5.8		
Consumer electronics					
Lighting devices			0.3		
Electric and electronic tools					
Toys and sports or free time equipment					
Medical devices					
Surveillance or control instruments					
Vending machines					

Synergies with other waste streams: Together with small appliances and small electronic waste, bulky waste (furniture, etc) is collected in the same CAS or Mobile truck

WASTE PREVENTION AND RE-USE

There is a social economy company that has an authorized facility in the Basque Country, very close to Logroño, for the preparation for the reuse of WEEE, during 2017, it was collected 430 tons of WEEE, of which the quantity destined for reuse is unknown. <http://www.chavicar.es/wp-content/uploads/2018/04/Memoria-Chavicar-2017.pdf>

COLLECTION SCHEMES

Collection

250+ information sources on waste collection, including reports on:

- *Waste statistics.*
- *Economic aspects of waste collection.*
- *Social aspects of waste collection.*
- *Regulation.*
- *Good practice.*

Reports covering:

- *24 Member States.*
- *3 waste streams*

Search Documents

[Home](#) / [Search Documents](#)

Search

Country

☐ Belgium

☐ The Netherlands

Waste streams

☐ PPW

☐ WEEE

☐ CDW

☐ Other

Keywords

☐ General information on WCS

☐ Waste statistics

☐ Economic aspects

☐ Social aspects

☐ Regulation

☐ Good practice

Search

Jaarverslag 2017 Een nieuw elan voor het beheer van huishoudelijk verpakkingsafval

Country: Belgium | Year: 2018 | Waste stream: PPW

THE DUTCH WEEE FLOWS: 2011 Dutch E-waste Quantification

Country: The Netherlands | Year: 2011 | Waste stream: WEEE

Afvalbenchmark 2016 in de Regio West-Brabant

Country: The Netherlands | Year: 2016 | Waste stream: PPW, CDW, Other

Afvalverwerking in Nederland, gegevens 2016

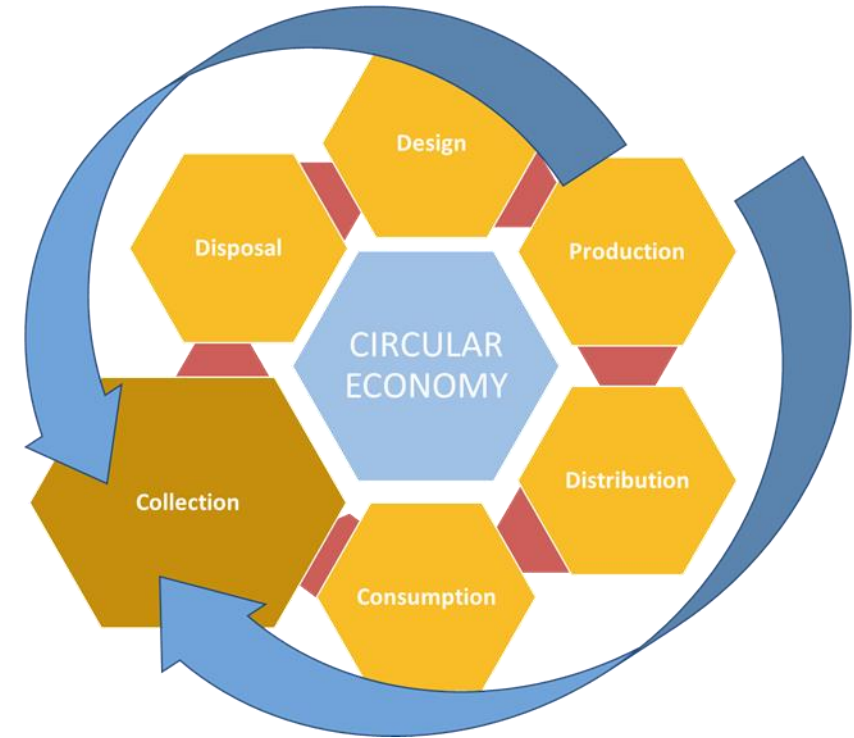
Country: The Netherlands | Year: 2016 | Waste stream: CDW, Other

Database on waste collection systems:

<https://www.collectors2020.eu/tools/wcs-database/>

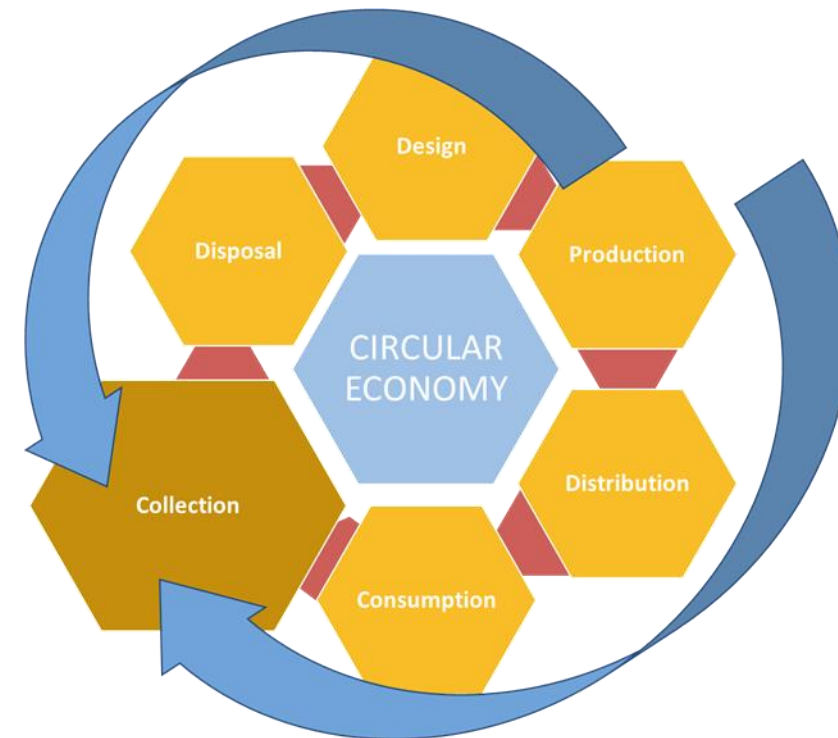
Waste library:

<https://www.collectors2020.eu/waste-library/>

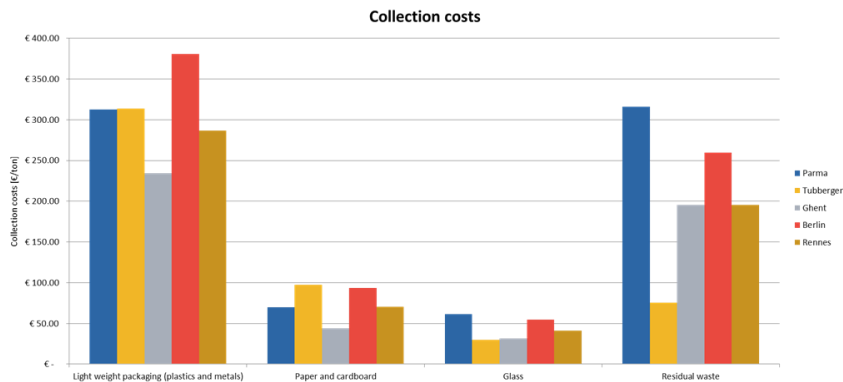
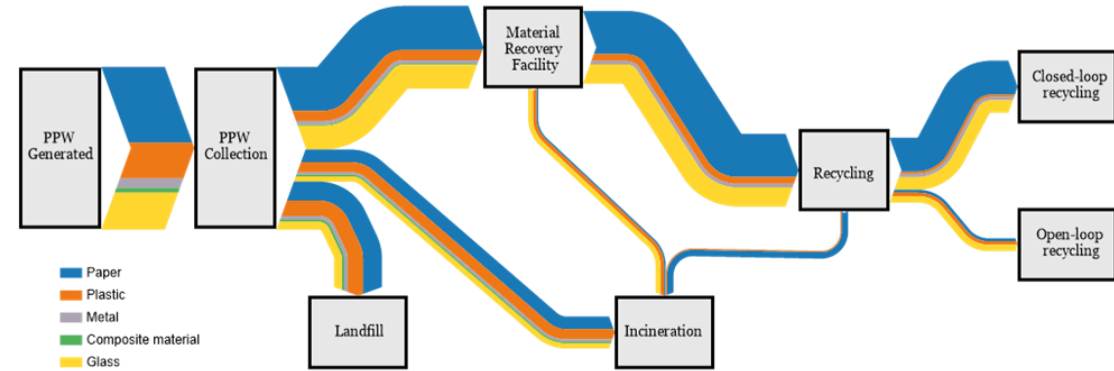




- | | |
|--|---|
| <p>1 MARKET/DEMAND
for secondary materials or for end applications</p> | <p>5 QUALITY OF WASTE
quality requirements / uncertainty & stability</p> |
| <p>2 MANUFACTURING INFRASTRUCTURE
with feedstock flexibility to absorb/use sec. materials</p> | <p>6 TRACEABILITY
proxy for quality</p> |
| <p>3 SORTING AND RECYCLING INFRASTRUCTURE
availability of this infrastructure</p> | <p>7 POLICY OBLIGATIONS
such as recycling targets</p> |
| <p>4 SUPPLY
minimum amount</p> | <p>8 ECONOMICS
costs ≤ revenues for each link in the value chain</p> |



Vanderreydt, et al (2019):
“COLLECTORS Deliverable 2.2: Analysis of boundary conditions for waste collection systems”



Container glass waste				
Scope	Collection method	Collection output	Sorting output	Recycling output
Transaprant glass ● Clear versus mixed colored glass ● Clear versus green versus brown glass ● ● Mixed glass ●	• CAS • Bring point ● • Door-to-door • Bring points + CAS • Road containers + CAS ● • Door-to-door + bring points ● • Bring points + CAS + other • Door-to-door + bring points + CAS ● ●	• Clear container glass ● ● • Coloured container glass ● ● ● ● • Mixed container glass ● • Mixed container glass co-mingled with other wastes	• Clear container glass cullet ● ● ● ● ● • Brown container glass cullet ● ● ● ● ● • Green container glass cullet ● ● ● ● ● • Mixed container glass cullet ● ● ● ● ●	• Container glass (flint, brown, green) ● ● ● ● ● • Insulation mineral wool (short glass fibre) • Ceramic sanitary ware • Fluxing agent in brick manufacture • Sports turf and related applications • Water filtration media • Abrasive • Aggregate in construction materials • Reflective highway paint

Four perspectives applied on 12 case studies (clockwise): (1) societal acceptance; (2) environmental performance; (3) circular economy perspective; (4) economic assessment

INTEGRATION:

Multi-criteria decision making and update web portal

IMPLEMENTATION:

Guidelines, policy briefs and project factsheets

CAPACITY BUILDING:

Training modules and workshops

Thank you!

Tjerk Wardenaar
PNO Consultants

tjerk.wardenaar@pnoconsultants.com

For more info about the project visit the COLLECTORS website at www.collectors2020.eu