Waste collection systems from a circular economy perspective

COLLECTORS final conference
17/11/2020

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VITO

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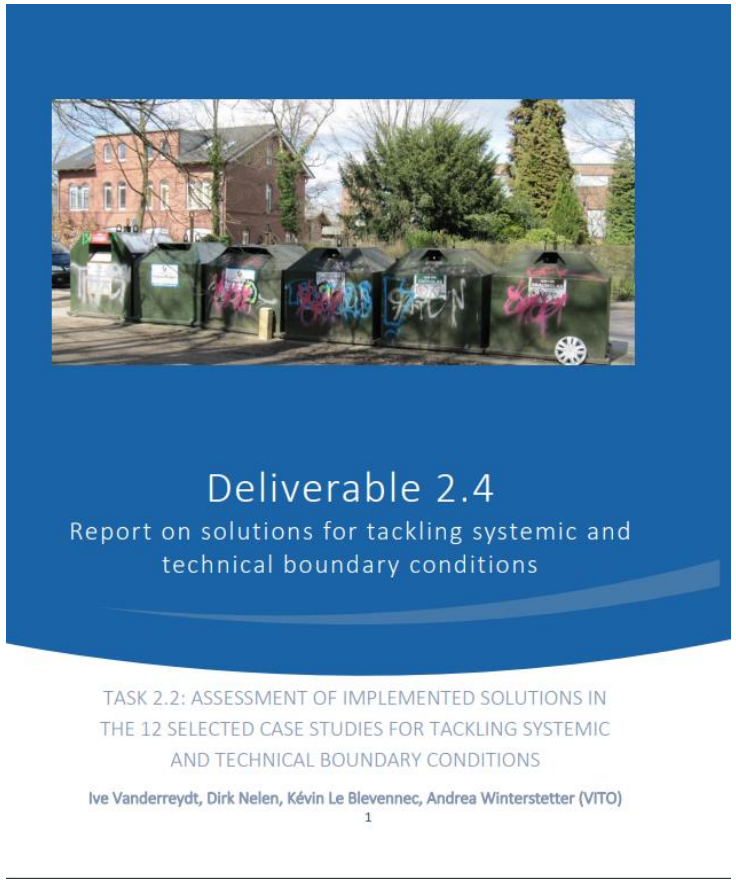
Improving Circularity

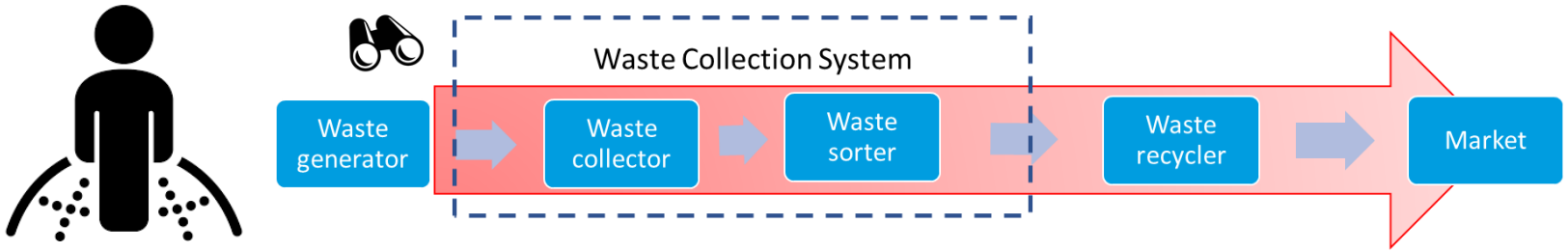


https://www.collectors2020.eu/wp-content/uploads/2020/04/D2.4_COLLECTORS-project_Analysis-case-studies_CE-perspective.pdf

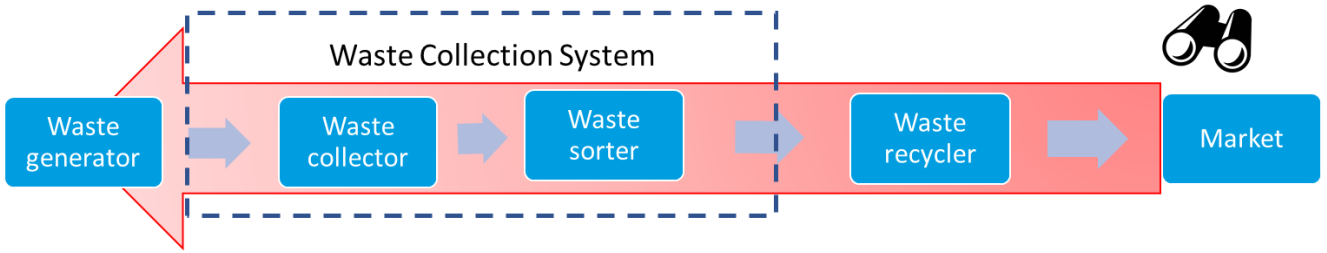
Source: European Environment Agency

Role of waste collection in recycling value chain

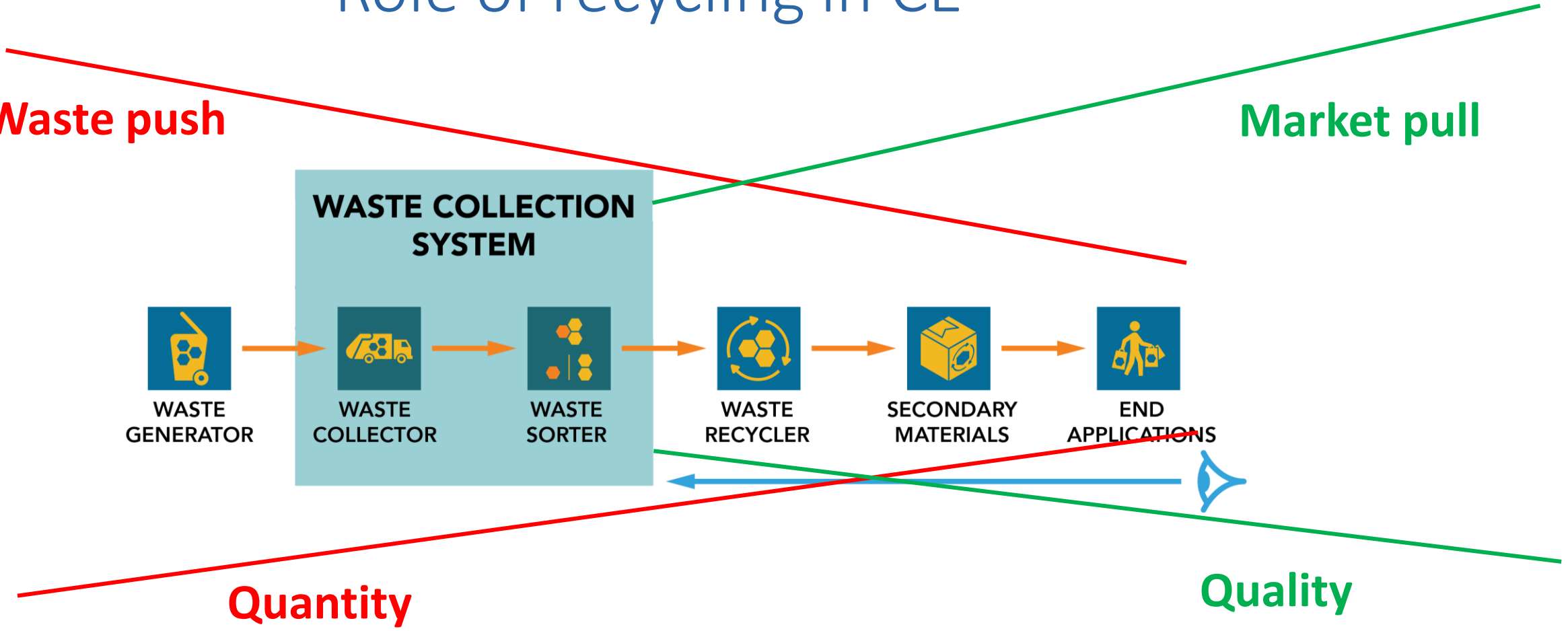
2 perspectives:
From citizen point of view (societal perspective)



From systemic and technical point of view (CE perspective)

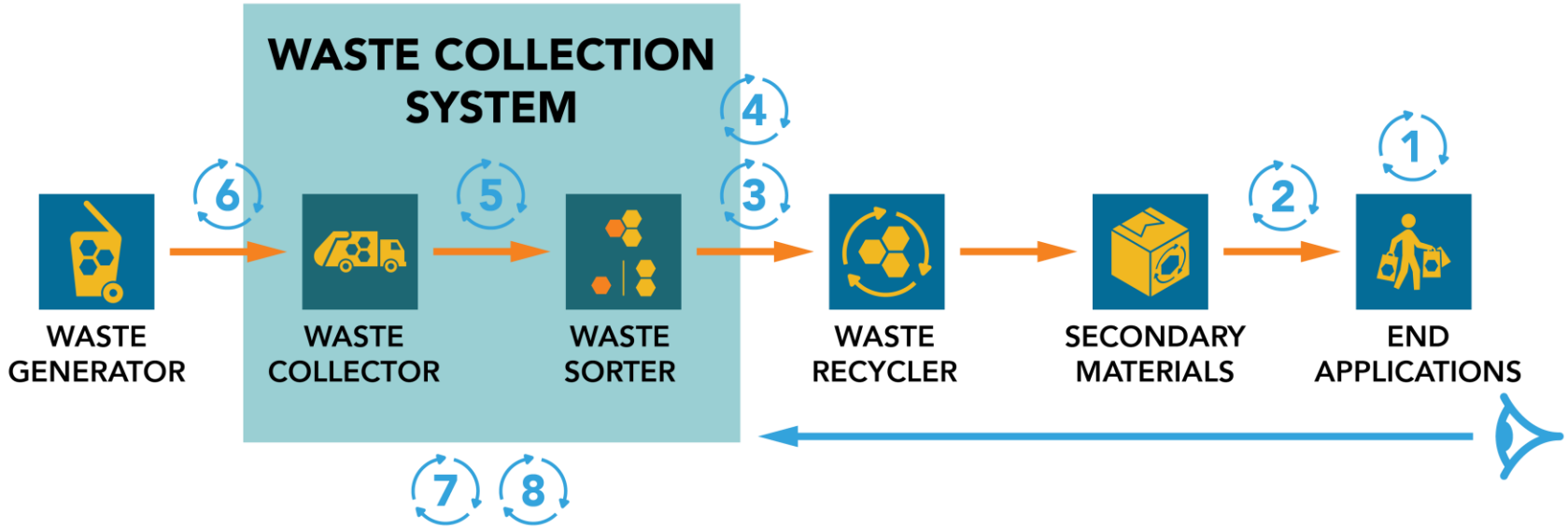


Role of recycling in CE



MAIN QUESTION

Which conditions enable the recycling value chain to produce more value, by producing more (quantitative) and/or better (qualitative) secondary materials?



1 **MARKET/DEMAND**
for secondary materials or for end applications

2 **MANUFACTURING INFRASTRUCTURE**
with feedstock flexibility to absorb/use sec. materials

3 **SORTING AND RECYCLING INFRASTRUCTURE**
availability of this infrastructure

4 **SUPPLY**
minimum amount

5 **QUALITY OF WASTE**
quality requirements / uncertainty & stability

6 **TRACEABILITY**
proxy for quality

7 **POLICY OBLIGATIONS**
such as recycling targets

8 **ECONOMICS**
costs ≤ revenues for each link in the value chain

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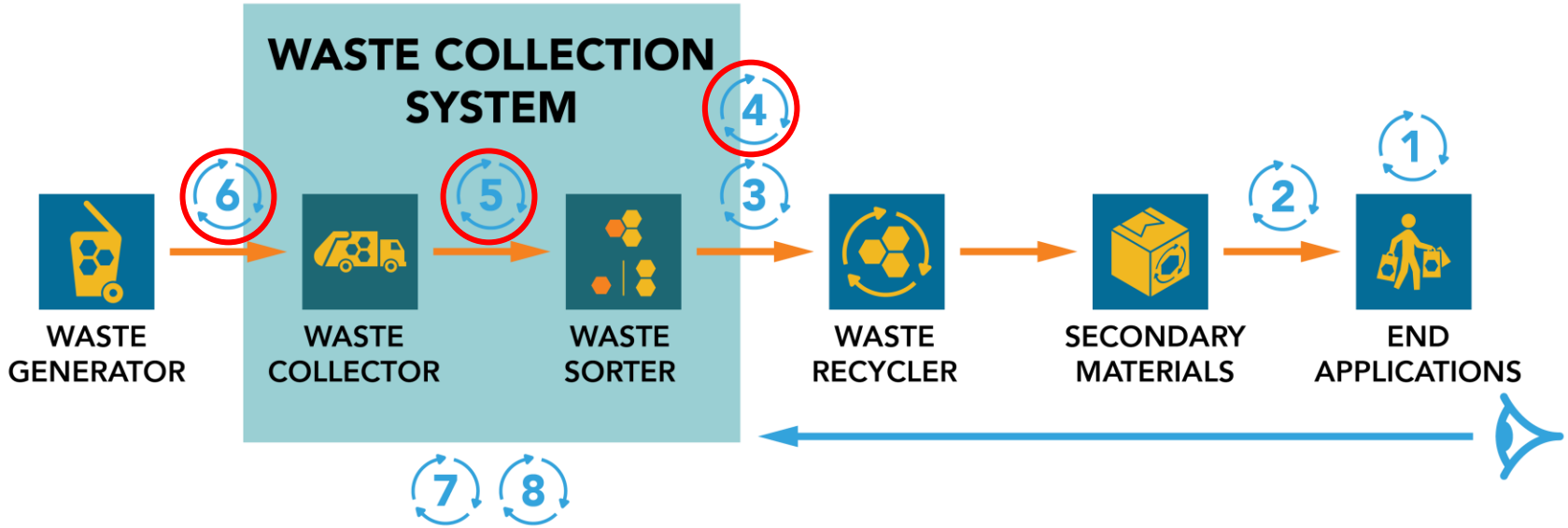

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CDW cases

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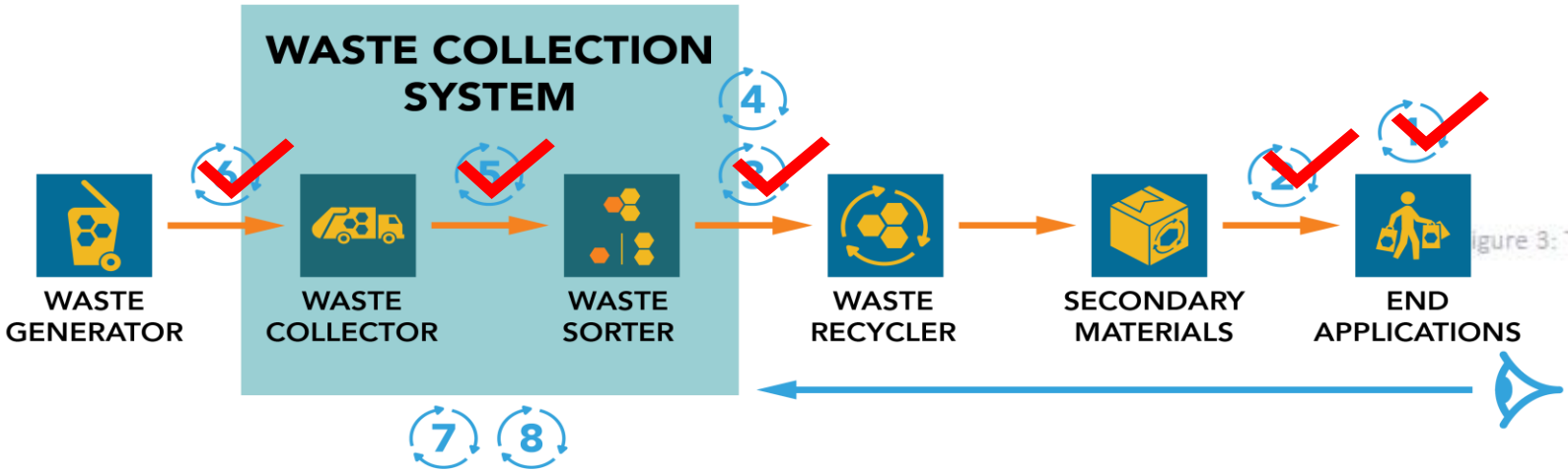

Figure 3: The CDW case studies: Odense (DK) and Reimerswaal (NL)

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5 WEEE cases

Main conclusions:

- Better waste quality when collected through retail bring points than through municipal collection points;
- Collection too little focused on corresponding sorting and recycling;
- Monitoring non-WEEE could improve quality of collected WEEE;
- Limiting scavenging improves the quality of the collected WEEE;
- No harmonization in the use of specific standards for collection (points)

5 PPW cases

Main conclusions:

- Align collection, sorting and recycling:
  - Scope of collection;
  - Information transfer;
  - Clear and standardized specifications;
- Collect easily sortable waste fractions together;
- Broaden collection scope from packaging to similar non-packaging waste fractions;
- Limit the scope of the waste collection to specific waste products

OUR CONSORTIUM

Thank you!

Contacts

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