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ABSTRACT

In the paper a desk study is presented with six selected cases on state of the art technology and design trends for innovative sorting and collection methods for household waste including food waste, which are in agreement with EU directives.

Collection methods

The cases are selected and described in collaboration with the Danish Waste Association. They represent five special challenges relevant for the living labs of the South Baltic Region “WasteMan” project. The study includes examples on collection methods for multiple fractions in old downtown areas and large housing development – see Figures, and old villages with lack of space for collection bins, as well as innovative suction systems and approaches for using shared recycling facilities to create awareness and changing user habits. The study is also focusing on the food waste system, i.e. the loop from households through pulp technologies to prepare food waste to biogas treatment and how to ensure the residuals from the biogas plant can be used as a soil improver/fertilizer.



Municipality of Kalundborg system of decentraly assembled containers.
Is waste sorting going to increase ?

The purpose was to investigate if sorting of organic waste, paper and glass from holiday houses will increase through establishment of sub-surface containers.

Common collection points in large housing development (pl. PSZOK)

The project purpose was to improve control and quality of waste separation by hiring trained personnel to advise citizens on the rules of separation.

Results: up to 75% recycling achieved - up to 45% of recyclable materials (plastics 16%, paper 14%, glass 10% and metals 3%) and 20-35% biowaste.



Public collection point with suction system in Helsingør - for medieval towns with constricted space and pathways [1]. The best solution must be a combination of systems, decided upon with involvement of the users



Public collection points in Kulturvet, central Copenhagen [2]; Solutions must fit both residents needs for sorting at home and the public collection point. It was found that the distance to the collection point is of lesser importance as long as residents are motivated to sort.



CONCLUSIONS

The overall conclusion was that there is no all-encompassing solution for sorting in medieval towns and modern cities. The best solution must therefore be a combination of systems, decided upon with involvement of the users.