

CHARM is about developing and implementing an asset management approach, which is **circular**, **sustainable** and **prevents downcycling** of materials in renovation and construction of social rented dwellings.

CHARM addresses Social Housing Organisations (SHO's) in North-West Europe to implement **resource efficiency** in their **asset management** by using **transferable strategies**. These strategies are going to optimise the (re)use of materials and natural resources. And: no more downcycling. Therefore, several demonstration exemplars are being carried out.

The **demonstration exemplars** are being carried out by four SHO's in France, Belgium, the United Kingdom and the Netherlands. The demonstration exemplars are real housing projects. There are four strategies: 1A, 1B, 2A and 2B.

	Demo exemplar	Strategy
Accord	12 new construction plastic free houses	2B
Paris Habitat	16 light renovations	1A
	12 deep renovations (occupied)	1A
	12 transformation	1A
Woonbedrijf	20 new construction	1B
	<i>Circular Kitchens</i>	2A
Zonnige Kempen	40 renovations, phased	1A
	2 new construction apartments	1B
	3 new construction dwellings	2B



The time span of **CHARM** is from October 2018 until October 2022.

Lead partner is TU Delft. The four Social Housing Organisations – where the demonstration exemplars are being tested – are: Paris Habitat, Zonnige Kempen Accord and Woonbron. The other partners are: University of Birmingham, the European Federation for Living and Kamp C.



OUTCOME



The construction sector is responsible for **more than 60%** of the resource use in Europe.

30 – 50% of the total material use takes place in the housing construction sector.

The sector generates **about 1/3** of all waste in the European Union.



BASELINE – OUTCOME CHARM

Average **material re-use**: 62 tons per new built house and 38 tons per renovated dwelling.

Implying a **36% re-use rate** compared to the current rate of 10%.



Social Housing Organisations in North-West Europe can adopt the circular asset management. By doing so, they can implement resource efficiency within their organisations.

The circular asset management will contain:

- Asset management strategies
- Guidelines for a circular procurement
- Material exchange platforms
- Active knowledge transfer

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