Ascending the Waste Hierarchy: Re-use potential in Swedish recycling centres

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Waste treatment in EU28

(Eurostat, 2019)
Alelyckan recycling centre

(Göteborgs Stad, 2010)
Collected and re-used amounts of waste at Alelyckan recycling centre in 2010

- 358 tonnes of waste prevented – 5.6 % of the total weighted waste received at the centre
- 1 300 tonnes of CO2-eq. avoided (Ljunggren Söderman et al., 2011)
Composition analysis of waste at two recycling centres

15.5 tonnes of waste was examined through composition analysis, and the re-use potential of nearly 17,000 products was assessed (Hultén et al., 2018)
Re-use potential in recycling centres (private enterprises)

- Identify what product groups can be effectively re-used
- Identify challenges in re-use operations
- Identify potential solutions to overcome the existing barriers

(Stena Recycling AB)
Product groups with high potential for re-use

(Malmö återbyggdepå) (Designboom) (El-kretsen)
Common challenges to re-use in recycling centres

• Waste classification
• Product design – difficult to disassemble
• Damage during transportation
• Scalable volume of products (by type)
• Extensive storage (warehousing) needed
• Efficient process for preparation for re-use
• Negative attitude of consumer due to uncertainty
Actions for increasing re-use in private recycling centres

• Prioritise well-defined waste from industrial partners (B2B)
• Focus on product groups with higher re-use potential
• Cooperation with actors having direct access to second-hand markets
• Salvage components if not possible to re-use the product
• Adapt business model to accommodate more re-use than recycling (future trend)
Thank you!