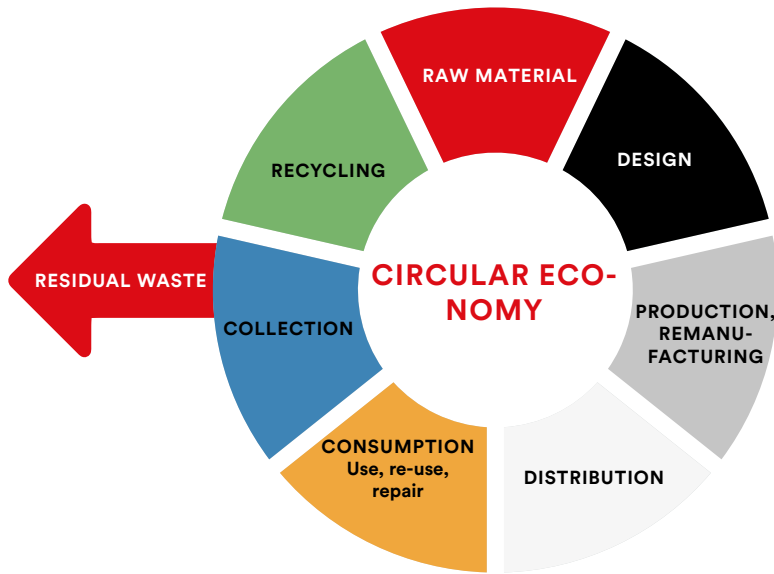


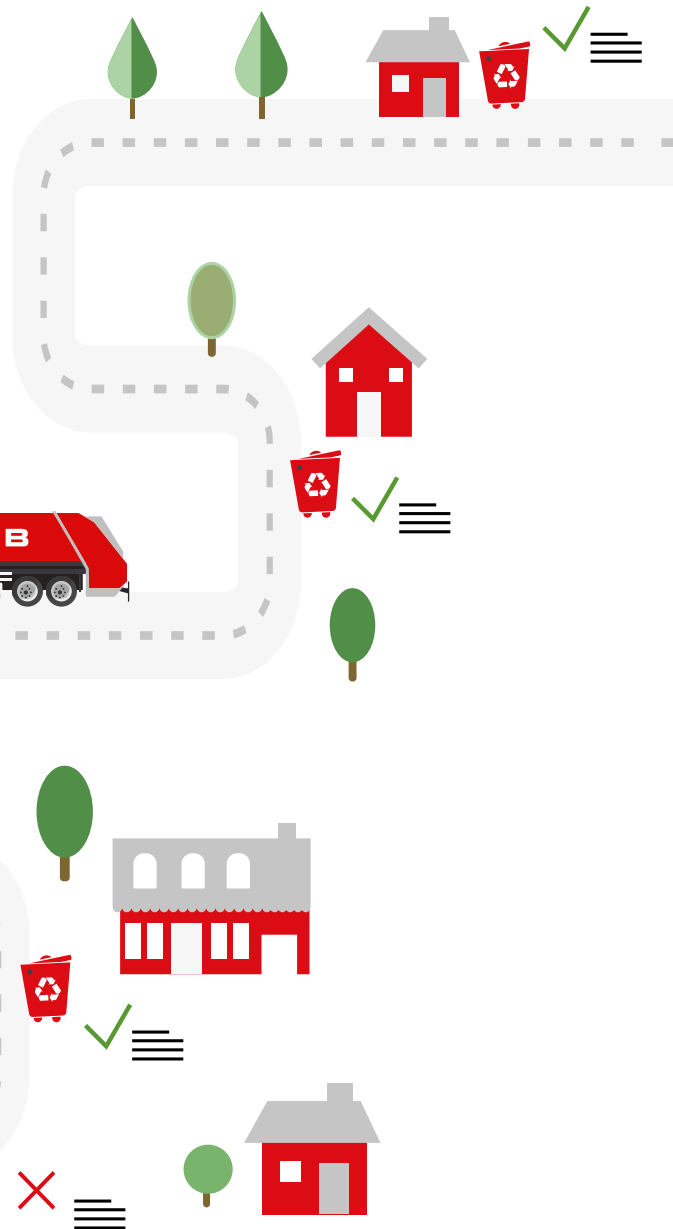
WEIGHING FOR STATISTICS

Weighing for statistics leads to many benefits, a fact that numerous Swedish councils can verify. The data are directly transferred into the business system of the municipality and creates an overview of number of bins, collection addresses, bin size and collection frequency. The data can be used for waste management planning and in the long run to help us get closer to a circular economy where waste is considered valuable raw material.



"The target for recycling of municipal waste in EU is 65% by 2030"

On-board scales and RFID-systems connected to the business system of the municipality provides complete overview and detailed statistics of the collected waste.



WEIGHING FOR STATISTICS

Swedish municipalities are responsible for their own household waste and are able to affect the amount of produced waste through proactive environmental work. Through their efforts the amount of waste can be reduced and material recycling improved. With mobile weighing and RFID-systems connected to the ERP of the municipality they gain total control and detailed statistics of the collected waste.

More than 170 mcouncils in Sweden, from Kiruna in the north to Trelleborg far south, have introduced automatic identification of household waste bins with RFID. The system contains of a RFID-tag with a unique identity that is mounted on the bin, and a RFID-system in the vehicle which records the collection in real-time as well as the GPS-position of the pick-up point.

The information is linked to each customer in the CRM through a software that transfers the data to the business system of the municipality. All information are transferred, for example collection address, fraction, size of the bin and timestamp, giving the municipality total control of the number of bins in use, where they are and that every customer gets the right service for the right cost.

When introducing this technique a lot of errors are often detected, such as wrong collection frequency, wrong bin size or surprisingly high amount of bins that are emptied each week despite not having a subscription.

MOBILE WEIGHING PROVIDES VALUABLE STATISTICS

Automatic identification can be combined with weighing the collected waste. The scales are integrated in the lifter of the vehicle and the weight is automatically recorded. The weighing system, containing load cells, connection equipment and a weighing instrument, is connected to the RFID-system. The weight of the waste is connected to the unique RFID-tag of the bin, and therefore also to the customer. The weight and associated data is recorded and displayed in the route software in the vehicle, and transferred to the business system of the municipality. The weighing systems are dynamic and does not affect the lift cycle, eliminating any time losses related to weighing.

”European Union’s goal is that 65% of the household waste goes to material recycling”

Weighing the waste in each bin and at each customer generates detailed statistics that can help to facilitate the collection process and the progression of waste management in many ways.

WASTE IS RAW MATERIAL IN A CIRCULAR ECONOMY

Circular economy is inspired by the cycle of nature. Our goal is that waste as we know it stop existing and instead be looked upon as raw material, for re-use, recycle, composted or waste-to-energy.

By automatically weigh the waste during collection, both residual and bio-waste, we gain continuous and detailed statistics over the waste volume associated to each source. This information can be used in the work of waste planning, follow-up of municipal objectives and in the progression towards circular economy.

OTHER INCENTIVES TO WEIGH WASTE DURING COLLECTION:

- Follow-up of the amount of residual waste and bio-waste generated in different areas.
- Identify problem areas with high volumes of waste.
- Allocation between household and corporate clients.
- Communication with residents, corporate clients, authorities and other involved parties.
- Evaluation of the effect of efforts to reduce waste.
- Reporting statistics to environmental authorities and EU
- Avoid overload.
- Comparison and wuality assurance of weighings from weighbridges.
- Increased transparency between waste producers, waste management companies and municipalities.

Mobile bin weighing systems on the lifter shall comply with STAFS 2016:7 and 2007:1.

Mobile chassis scales for weighing of containers and underground bins shall comply to STAFS 2016:12 and STAFS 2007:19.