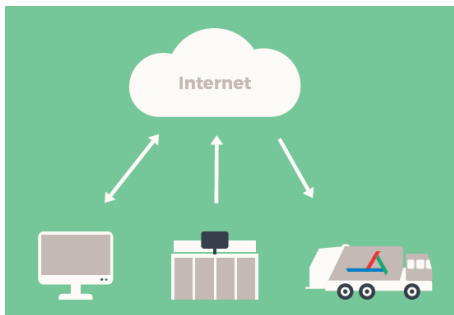


Hubbe™ - Intelligent waste segregation at source

Hubbe is a **smart recycling hub** equipped with pedagogic, on-line units for sorting of recyclable waste from businesses, schools and households.

Hubbe is **equipped with state-of-the-art sensor technology** and wireless solutions for monitoring of waste types and fill grades.

Hubbe **communicates with the user** about recycling and environmental benefits through a touch screen, leading to improved awareness and motivation. This leads to better segregation, higher value of the materials and better material recovery.



Hubbe is always **on-line with the waste collection contractor** for monitoring of filling grades. This in turn gives more efficient logistics in waste collection, transport cost savings and climate benefits.

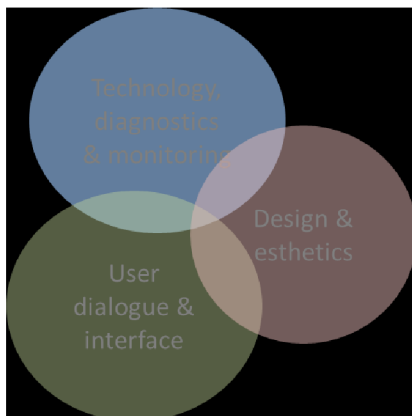
Hubbe is flexible and can be **adjusted in size and shape** to fit the client's environment. The dialogue and messages on the screen can be tailor-made to the client's preference.



The Hubbe background

Sweden has among the world's highest collection and recycling rates. Still, people ask themselves if it's worth sorting waste from an environmental point-of-view. Besides, many source-sorting stations at offices are hidden in the basement, ugly, dirty and non-flexible. We want to change this and move Hubbe into the heart of the office. Thus, we get an interactive dialogue with the users, cleaner materials, higher material prices and yield in the recycling process and better logistics – everything looking at waste as a resource and moving towards circular economy.

The Hubbe development team



LL Group is active since 25 years in waste collection and recycling, sanitary cleaning, entrepreneurial works and environmental consulting. In 2016, the company received a grant from the strategic innovation program RE:Source to develop the Hubbe concept and technology.

For this project, LL Group cooperates with the industrial design and innovation company Above (www.above.se) and the software and hardware technology development company Dametric (www.dametric.se).

This way, we have solid waste management expertise in combination with new IT solutions, user dialogue and modern design at the same time.

Status of the Hubbe project

- 29-30 March 2017 – The Hubbe concept is introduced in Malmö, Sweden in a national conference on digital and innovative solutions in the waste management sector "Waste in New Focus", administered by Waste Refinery and Chalmers University of Technology, IVL Swedish Environmental Institute, RISE and RE:Source.
- 4 May, Stockholm – The first Hubbe prototype is showcased at the exhibition center during the "National conference on cooperation for innovation", organized by the Sweden's Innovation Agency (Vinnova), the Swedish Energy Agency and Formas.
- September 2017, Stockholm – Two prototypes of Hubbe are installed and tested at iZettle, a high-tech company with 300 staff developing wireless solutions for digital payment methods, and at the headquarters of Sweden's Innovation Agency.

