

# Making the Impossible Solution Possible

One of the most rewarding benefits of emerging technology is that each new advancement has the capability of solving old problems. Many times you already know what the solution would accomplish – you just don't know how to execute it.

For Renova, a Swedish waste management company based in the city of Gothenburg, the solution they had in mind was innovative and simple but seemingly not feasible. But then they matched the right new technology to the right old situation, and came up with a winning answer.

## Converting weights to rates

What Renova wanted to accomplish was deceptively easy – an efficient and equitable way to charge their customers.

The idea is basic and brilliant: charge customers based on the weight of their garbage. But it creates an information challenge compared to just charging everyone the same. To do it, you have to enter data at every single home on a pick-up route. But Renova worked with technology vendors to devise a combination of radio-frequency identification (RFID), barcode scanning, customized software and rugged handheld computers, and the new system streamlines the process impressively.

## Individual identification for individual billing

It starts with a process to identify individual garbage bins. Renova employees use a rugged Recon handheld equipped with a combination of barcode and RFID technology to “tag” each bin with a distinct identity.

Then, when the collection operator arrives at any home for collection, it's a simple matter of using the handheld to identify the bin and double-check the address of the owner.

Then the bin is lifted by the truck's machinery, which includes technology that measures the weight. Customized software aboard the truck links the owner and weight data, and that information is transmitted via GPRS to company headquarters. At the end of the day, the combined identity and weight data are transferred to Renova's billing system, which establishes the proper charge for each customer.

## The perfect combination of technology and tools

Jan Nyman, the IT project leader at Renova, says Renova now has an elegant solution to what could have been a paperwork nightmare. “Something as simple as correlating garbage weight to an individual owner could have been a messy, labor-intensive and potentially inaccurate process,” he says. “These collectors work out in the weather, and in a challenging environment, to say the least. Using rugged handhelds and RFID technology is a perfect solution for them, where no paper is needed until a final bill goes to the customer.”

! For more information about the Recon visit [www.ultrarugged.com](http://www.ultrarugged.com) or [www.handheldgroup.com](http://www.handheldgroup.com)



### Challenge

To charge customers based on the weight of their garbage instead of just charging everyone the same, - and not turn that into a labor-intensive paperwork nightmare.

### Solution

Renova selected the Recon rugged PDAs equipped with a special barcode and RFID solution in order to “tag” each waste bin with its own identity.

### Result

Each household now gets invoiced individually according to the weight of their waste, - an efficient and equitable way for Renova to charge their customers.



Handheld is a world wide supplier of rugged PDAs and handheld computers. All our products are ruggedized and can withstand water, dust, drops and vast temperature changes. Handheld and its partners deliver complete mobility solutions to businesses in industries such as logistics, forestry, public transportation, construction, military and security.

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