How to apply ICTs to waste management

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Problems of waste management

- Bothers to neighbours: noise, odours, etc.
- Fuel consumption
- Air pollution
- Economic cost
- Occupational hazards to workers
- Use of public space
How is waste collection currently designed?

- In general terms, following static routes

- Containers are collected whether they are full or not

- If waste manager does not collect statistic data, the location of the containers does not follow optimisation criteria
What is the user's role?

• It receives information from the service in a passive way (through webs, campaigns, etc.)

• He is asked for duties (sorting waste, paying the charge, etc.)

• There is no direct relation between the user and the waste manager

• The user does not actively participate in the service

• In some cases, this passive role derives in frustration and no cooperation with the service
How can ICTs help improve waste collection?

ICTs can help optimize waste collection, monitor the service and involve users.
Aims of the project

• To demonstrate the potential of ICTs for optimising waste management
• To establish a way forward for the standard adoption of a more sustainable waste management model.
• Actuació
• Co-financed through the LIFE + Program of the European Commission
• Calendar: July 2014 - September 2016
How to apply ICTs to waste management
Real-time information of the service

- Filling level of the containers
- Emptying of the containers
- Location of the collection trucks
- Incident reporting (e.g. container burning)
Web platform for the waste manager

- Route monitoring
- Route optimization
- Statistics of routes and containers
Web platform for the user

- Information about the location and the filling level of the containers
- Information about the service
- Campaigns and incentives program
Mobile application

- Incident reporting
- Reporting of information about the filling level of the containers
- Sending comments and suggestions
Seville

- 700,000 inhabitants
- 3 routes in the historic centre (Porvenir, San Pablo, Centro)
- Side-loading containers (glass)
- Underground containers (all fractions)
Chania

- 156,000 inhabitants
- High amount of seasonal population
- Rear-loading containers and igloos/boxes for recyclable waste (paper + packaging)
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