



How to apply ICTs to waste management

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3rd International Conference on Sustainable Solid Waste Management

Tinos, 3th July 2015

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?

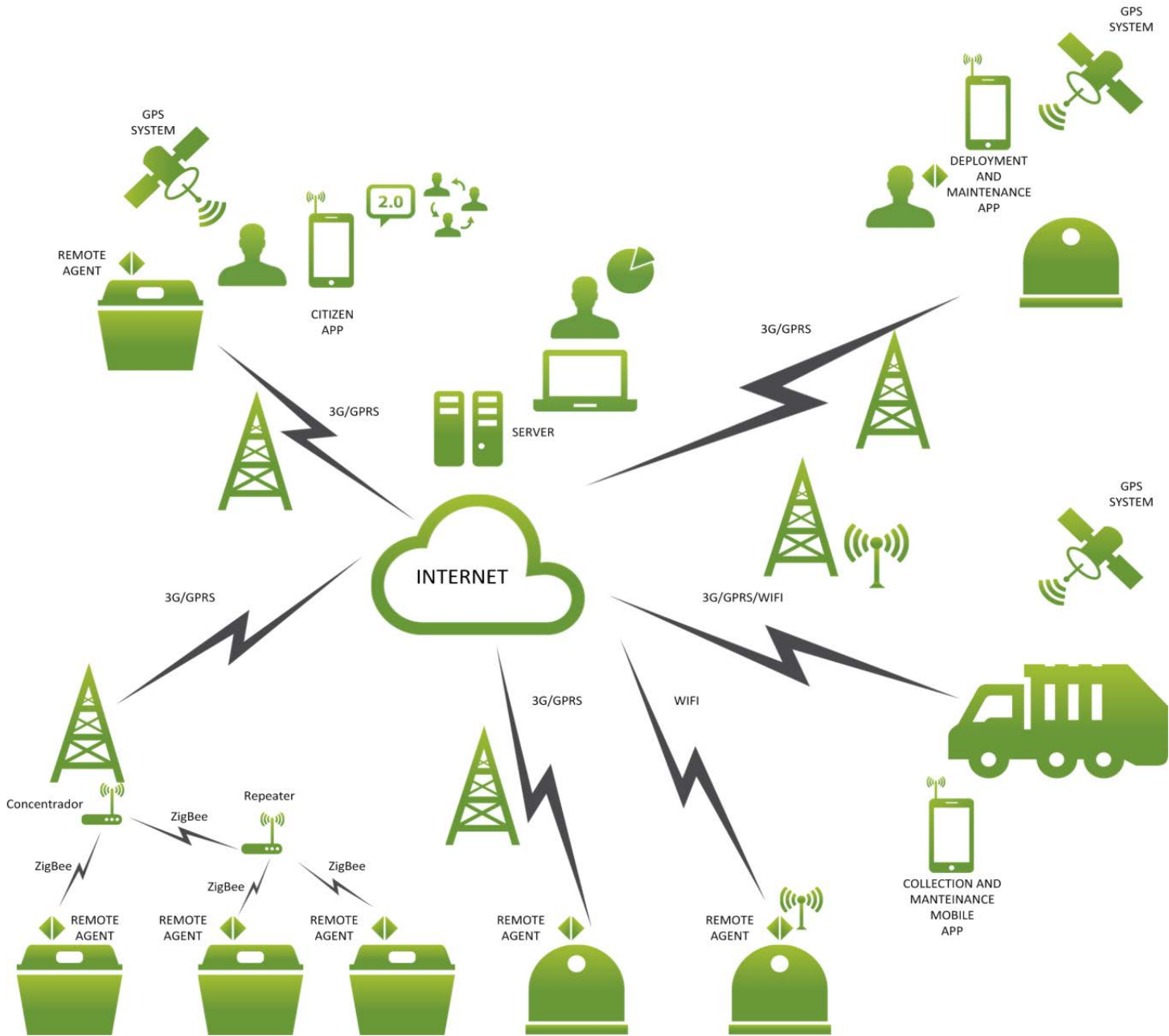
ICTs can help **optimize** waste collection, **monitor** the service and **involve** users

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**

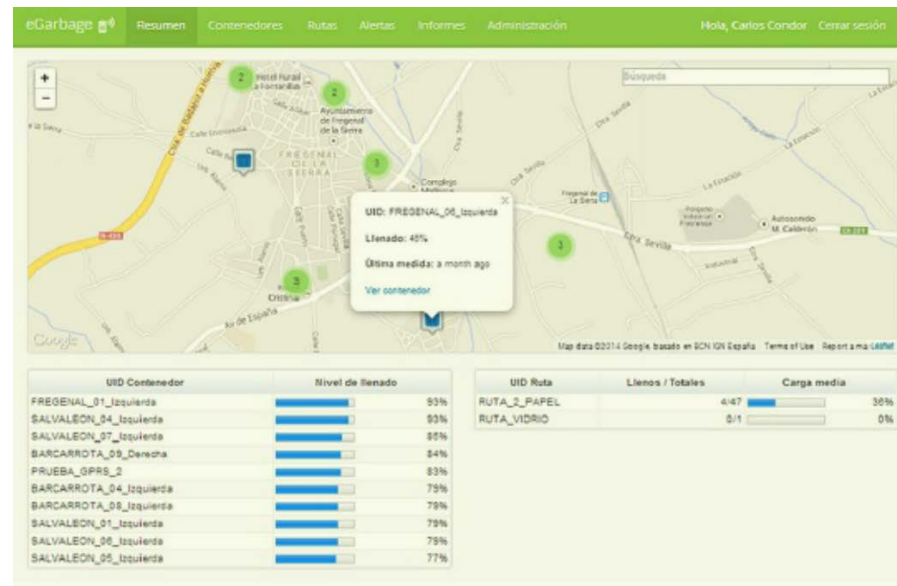
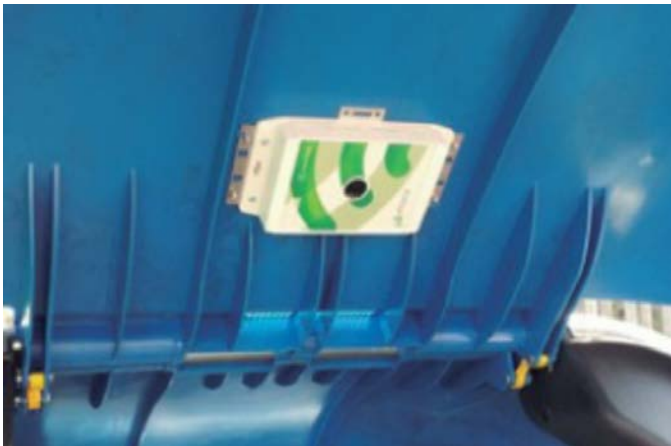


LIFE EWAS Consortium: Leaders of Working Packages



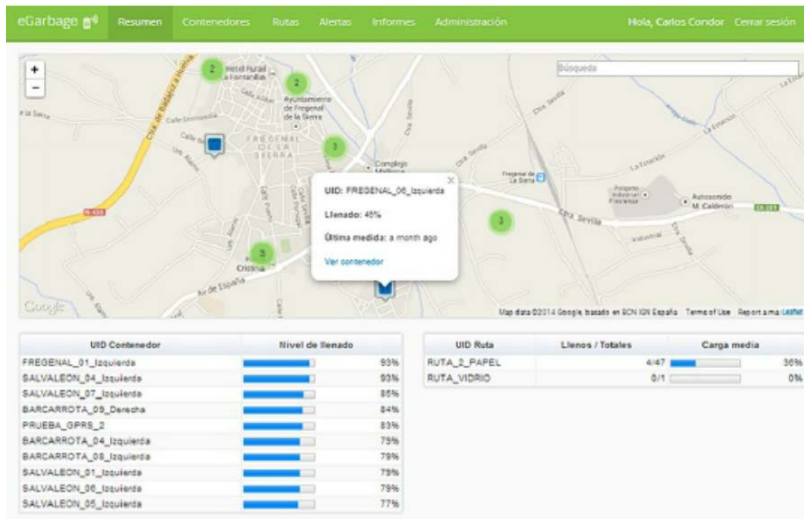
Real-time information of the service

- **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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Grant agreement no.:
LIFE13 ENV/ES/080725