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E TRACK
using IT technologies to reduce the waste collection footprint in regional unit of Chania in Crete

Speaker

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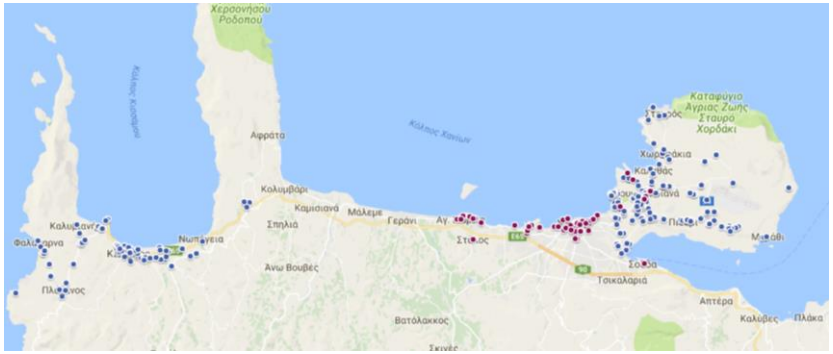
Thematic Seminar 1
“Use of Information & Data in the waste field”

Introduction

- Challenges in waste collection
  - Monitoring the filling level of waste in recycling containers in remote areas, reduces the necessary routes of the collection tracks and eventually the fuel consumption.
  - In touristic areas with high population fluctuation during summer and winter, altering the routes to collect only the full containers reduces the resources used.

- Pilot scale implementation north Chania
  - in Blue container for recyclable packages (plastics, paper, metals & aluminum)
  - and Yellow container for glass.

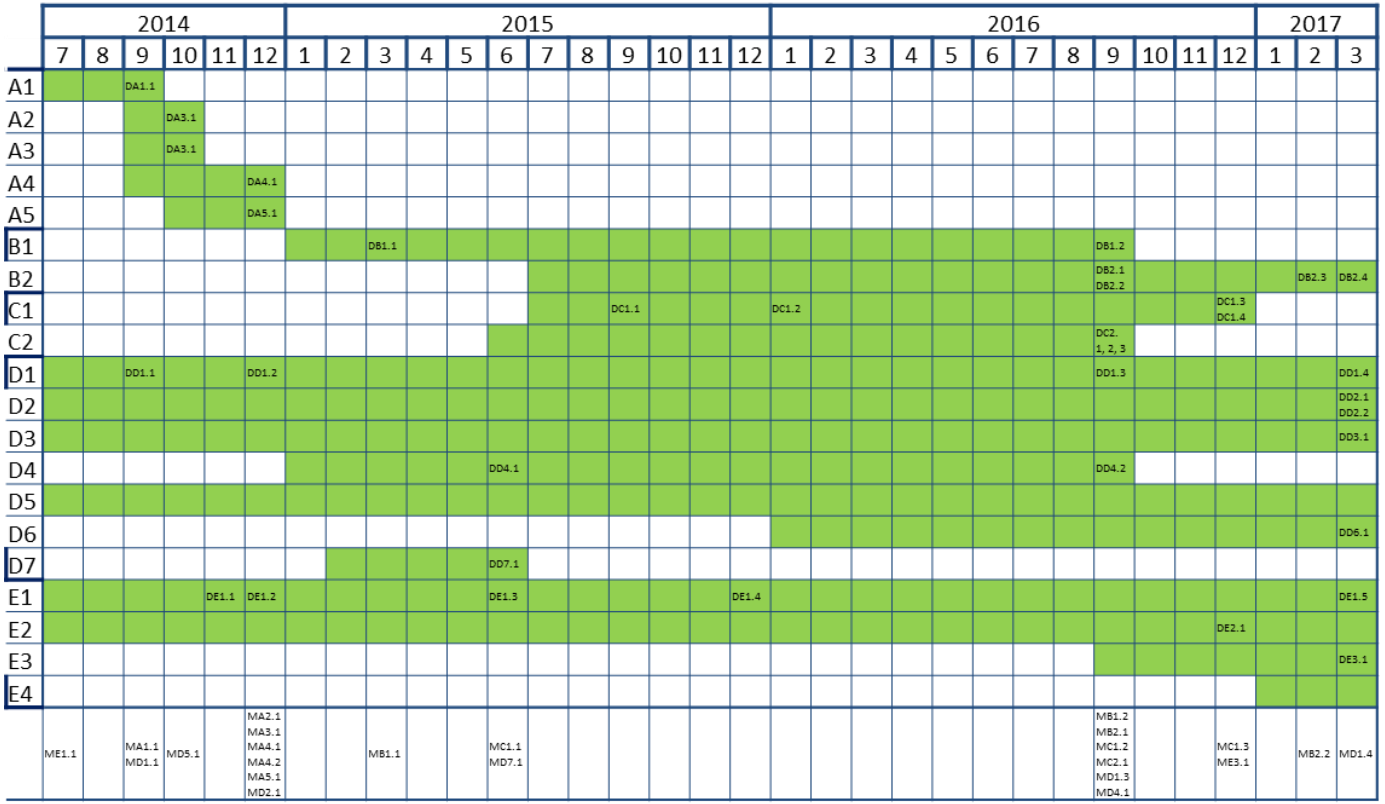


- Objective
  - The project “Life+ 2013 EWAS introduced a network of sensors installed in the containers, for the collection of recyclables and glass (blue and yellow containers). The sensors were sending data of filling level of each container through GPRS. The data where processed and projected online in a web based interface to the waste manager, providing him with real time information about the condition of sensors, containers, the waste materials quantity and the route efficiency.

Implementation:

- Timeline

The project started at July 2014 and after extension ended in March of 2017 (33 months)



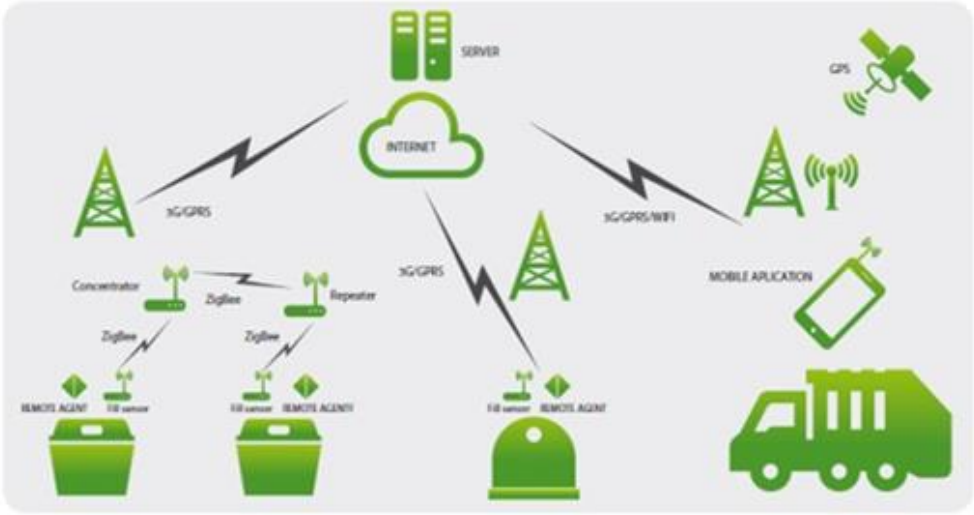
Partners – Participants :

Participant	Country	Type of partner
Wellness Telecom	Seville, Spain	Coordinator Technical partner
D-WASTE	Athens, Greece	Waste Management Consultant Technical /Communication Partner
DEDISA	Chania, Greece	Private Waste Manager
ENT	Barcelona, Spain	Environmental and Economic Consultancy
LIPASAM	Seville, Spain	Public Waste Manager

Evidence of success:

❑ Goals to achieve

- Reduced frequency of collection
- Installation of remote management in containers and trucks;
- Cost Reduction
- Avoid waste generation and increase recycling awareness
- Minimize vandalism
- Reduce the risk of fire
- Improve routes
- Improve circulation and mobility



❑ Stakeholders acceptance

- The citizens in most of the area showed their enthusiasm for the project and there were willing to take care of the containers in their territory
- No sensors were destroyed during the program due to vandalism or fire, two sensors were found with water inside that had corroded the internal components.

Lessons learned- Key success factors:

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- **Assumptions**

- The locations that had more than one container an assumption was made that all the containers fill-up at the same time. The condition of the group of the containers was monitored with sensor installed in the one container of the group
- The areas with no GPRS signal was monitored from the fleet management GPS, website that the tracks are equipped while the containers conditions and filling rate by information collected from the driver
- The other areas that no sensor could be installed, were also monitored from the fleet management GPS, website that the tracks are equipped while the containers conditions and filling pace by information collected from the driver
- When a sensor had stopped sending data and it was declared not reparable, the data was collected with the same method as the containers with no sensor installed

- **Negative aspects**

- The areas with no GPRS signal
- The other areas that no sensor could be installed (military areas, schools)
- in recycling stream most of the recyclables material are big cardboard boxes big pieces of plastic wrapping film that when they are disposed to the blue container, the container looks full immediately

Aims / objectives

1. Evaluate EU policy and legislation (Waste Framework Directive) options and opportunities related to waste management collection practices.

2. Contribute on mobilizing ICTs to facilitate the transition to an energy-efficient, low-carbon economy waste management methodologies. The overall aim is to contribute with the EU objectives in relation to GHG reduction for 2020 in the waste management sector.

3. Develop appropriate environmental assessment, implementation and monitoring activities related to different waste collection methodologies and the respective benefits to improve current waste management practices.
- Improvement of people's quality of life
- Reduce environmental impact comparing with current methodologies
- Increase waste recycling level and citizens' cooperation
- Reduce investment and operational costs, noise and traffic problems

4. Demonstrate the optimization of waste management practices (Local Action Plans) through the implementation of the EWAS model at a local and sectoral level.

5. Increase the awareness of new waste collection methodologies, provide training and disseminate information for the active participation of local stakeholders.

6. The final objective of EWAS is to create, implement and demonstrate the impact and increased sustainability of waste collection methodologies by using innovative ICT solution at the same time as it raise awareness about recycling, saves costs and reduces GHG emissions in compliance with the EU 2020 goals.

Contact details:

http://life-ewas.eu/el/

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Thank you!

Questions welcome

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