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## SMART GROUND

### Project Details :

Project manager:	Valjus Tuire
Project number:	50403-30052
Duration:	2015-2018 (2.5 years)
Keywords:	secondary raw materials, data bank, environment, geophysics, geochemistry
Place names:	Aijala, Mikkeli
Collaboration:	ENCO SRL Italy, MAMK Finland, GTK Finland, Metsäsairila Oy Finland, VTT Finland, UP Hungary, BZN Hungary, MKM Hungary, UNITO Italy 1, IMAGEO SRL Italy, ATOS SPAIN SA Spain, CU United Kingdom, REG.PIEMONTE Italy, BIOAZUL Spain

### Summary:

Smart Ground is a project funded by the EU Horizon 2020 Framework Program. The total budget of the project is approximately EUR 2.5 million. €, of which GTK's share is € 173,000. The project includes 14 partners from 5 different Member States. The project coordinator is the Italian ENCO-SRL and the scientific coordinator of the Università degli Studi di Torino (UNITO). The project started on October 1, 2015 and lasts 2.5 years.

The Smart Ground project is developing a data bank for recoverable waste streams. Information on various landfills, their composition and size is collected from the waste management companies in the target countries. More detailed information is collected by sampling and sample analysis with pilot sites selected from 3 countries from each participating country. Pilot areas will test methods for identifying potential raw material resources at different landfills and current waste streams that can be utilized. The goal is to make more efficient use of materials, especially metals, and to enable new business ideas.

The main task of GTK in the Smart Ground project is to demonstrate the usefulness of geophysical and geochemical research methods in identifying the structure of the landfill and potential metallic components. The spatial analysis is used to determine whether it is possible to identify the lost landfills that existed in ancient times using the geophysical and lidar material. Geochemical sampling and analysis are performed on selected pilot sites. Different methods of geophysics are modeled and the sections of the landfill structure, the deposits and the physical landfill areas. Geophysics also directs heavy sampling. GTK also makes sampling and geophysics an estimate of the recyclable raw material potential of the pilot sites. The research results are presented as different 3D models,

The Smart Ground project promotes information flow, communication, publishing and education related to waste recycling materials at national and international level. The data bank developed by the project includes technical, legislative and financial information on recycled raw materials within the EU.

### Publications :

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