



EACEA

Education, Audiovisual and Culture Executive Agency



RECDEV | Innovative Training solutions for the WEEE Recycling Industry

Project number: 540527-LLP1-2013-1-GR-LEONARDO-LMP

CYPRUS 2016 4th International Conference on Sustainable Solid
Waste Management Limassol

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RECDEV - Innovative 3D training platform for WEEE dismantling and recycling

* Seven (7) Partners from five (5) EU Countries

Greece – ARVIS SA, OmegaTech, HSWMA

Austria – BAN Sozialökonomische BetriebsgmbH

Slovenia – Maribor University

Romania – NCSPC

Czech Republic – Mendel University



What kind of Partners:

Two (2) SMEs with expertise in the field of Environmental Protection, Sustainability and Waste Management

One (1) SME with expertise in ICT

* Two (2) Universities

* Website – www.recdev.eu

* Two (2) Associations



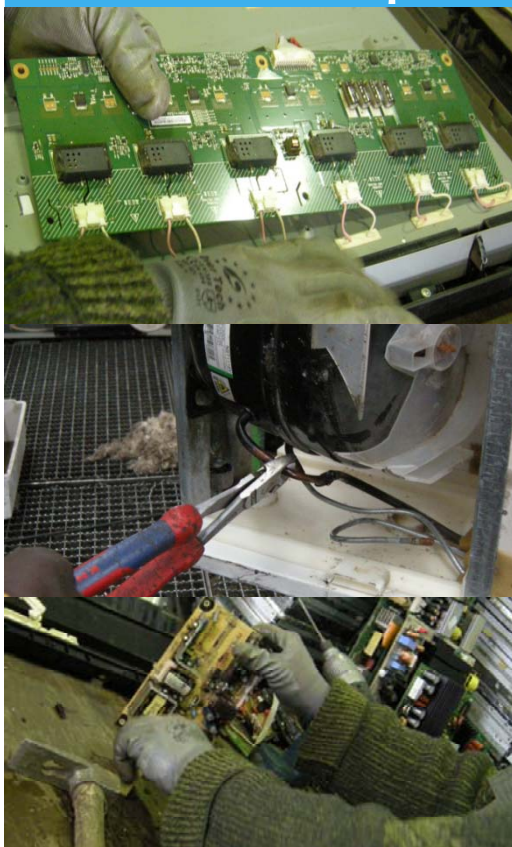
RECDEV - Innovative 3D training platform for WEEE dismantling and recycling

RECDEV project's objective-1

- * The development of ICT-based self and distance learning training courses familiarizing learners/users with the disassembly of Electrical and electronic devices and the identification of types and qualities of materials embodied
- * It targets both low level workforce (disassembly), aiming at employability strengthening, safety at work and developing skills as well as higher employers (materials identification) covering a crucial training gap in the WEEE industry
- * The training material will be prepared in the form of scenarios, will be enhanced with multimedia material and developed so as to take the form of 3D training scenarios
- * The scenarios will in turn be transformed into 3D situations through Virtual Environment applications (ICT) simulating the real world
- * In these, 3D virtual representations of real devices will be enacted. The beneficiaries/learners will thus be able to participate in simulations of real-life situations (based on the training scenarios) and disassembly of the devices
- * Website – www.recdev.eu



RECDEV - Innovative 3D training platform for WEEE dismantling and recycling



Project's objective-2

To develop, pilot implement and evaluate an interactive, multimedia and multilingual training approach that will:

familiarize low level trainees with the WEEE disassembly allowing them to perform the activity virtually before going physically to the workshop and working area

help higher level skilled personnel of WEEE sector to develop skills on identifying the types and qualities of the materials included in relevant e-waste

To integrate existing practices and experiences of the partners into the design of high-quality 3D training scenarios

To modernize WEEE educational content with state of the art ICT tools and Ontology on WEEE

RECDEV - Innovative 3D training platform for WEEE dismantling and recycling

Stakeholders/Target Group:

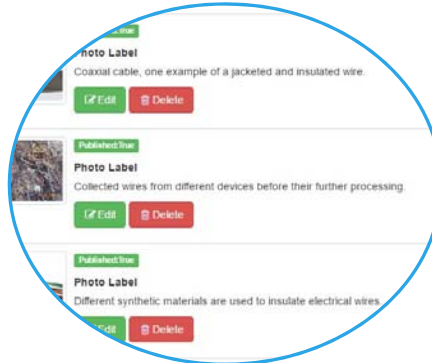
- Recyclers
- Association
- VET Institutions



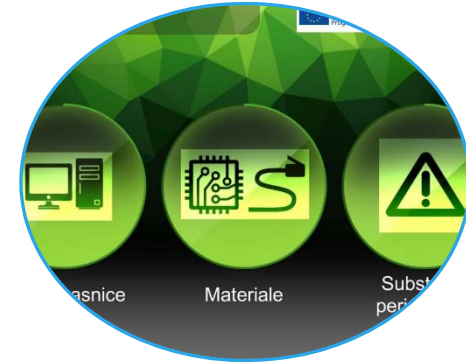
Project Milestones



Collection of
Multimedia data
and information

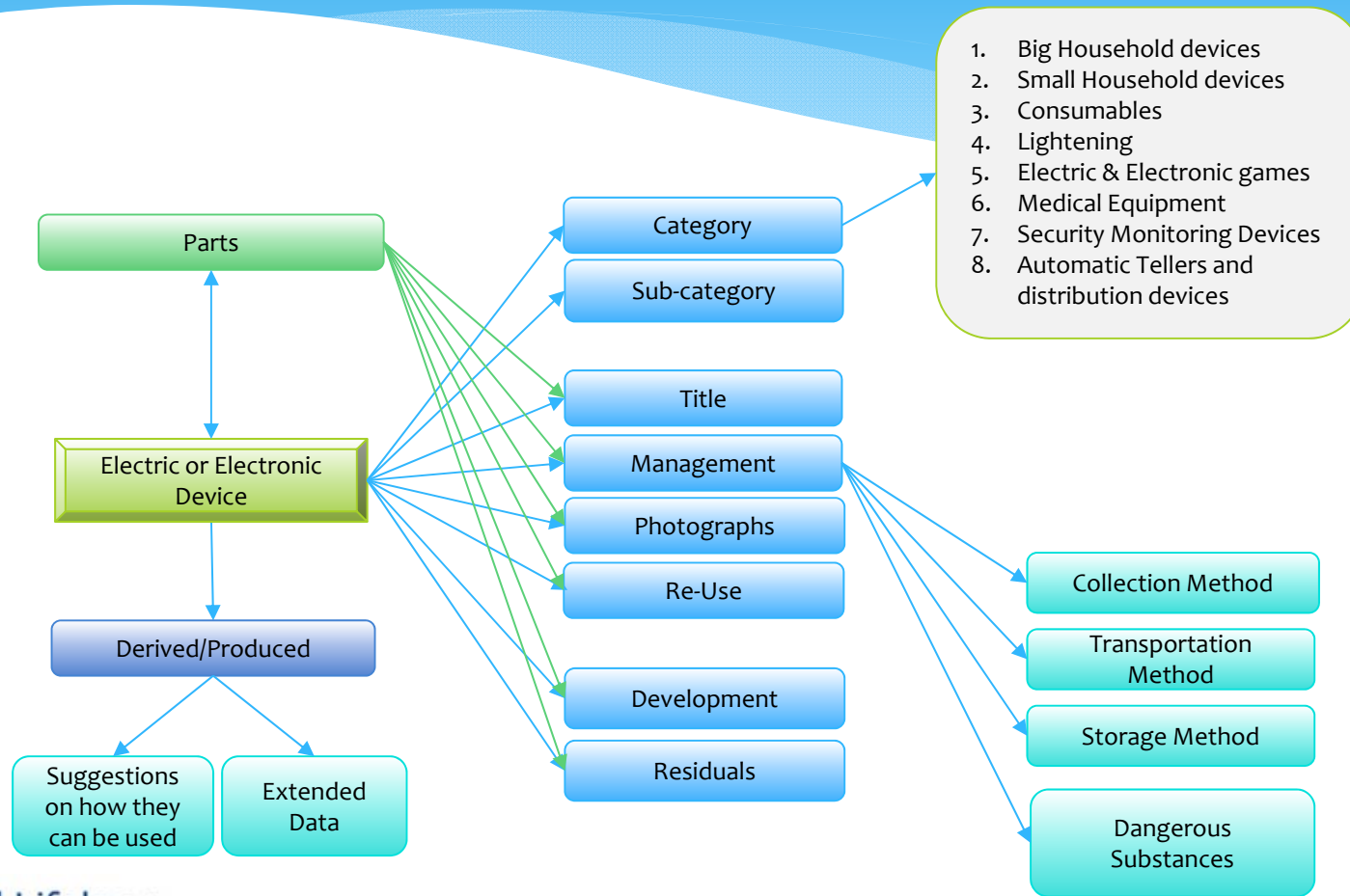


Development of
Training Courses
and Ontology

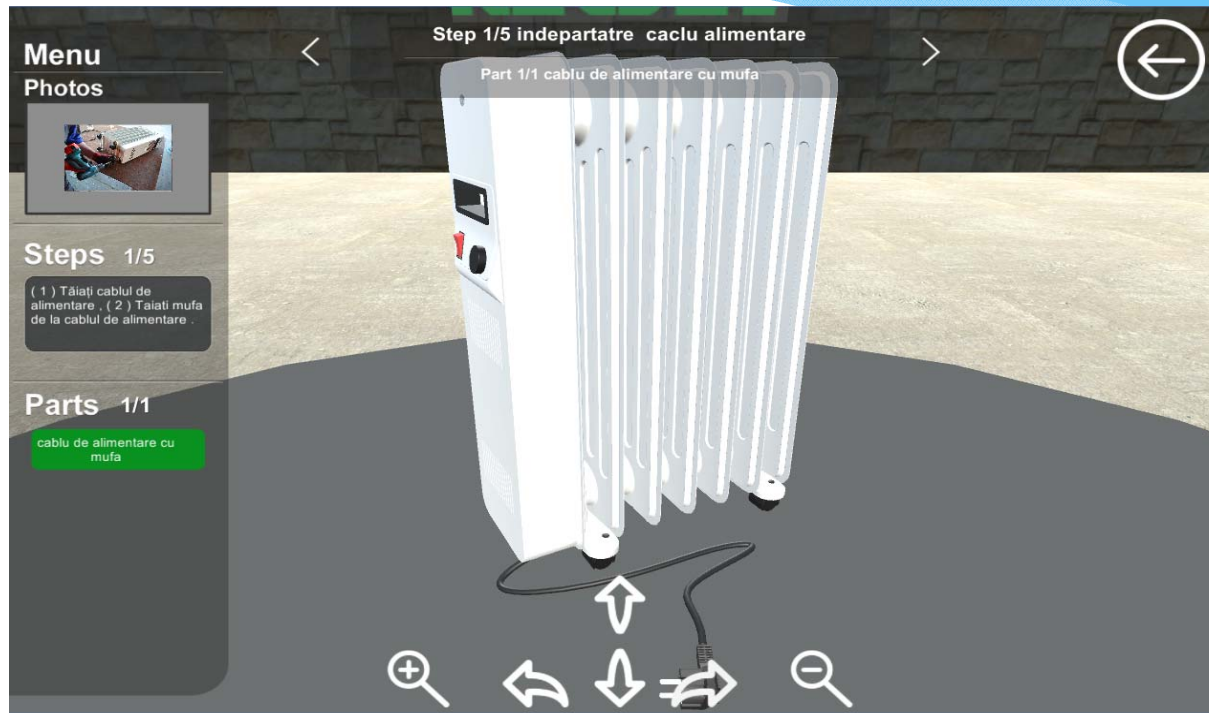


Production of a 3D
Training
Platform/Software

Data Schematics



Interactive 3D Platform



- Selection of Device
- Projection of its external/internal various parts
- 3D Photographs and various other details such as toxicity, legal framework, collection and management approach

Interactive 3D Platform

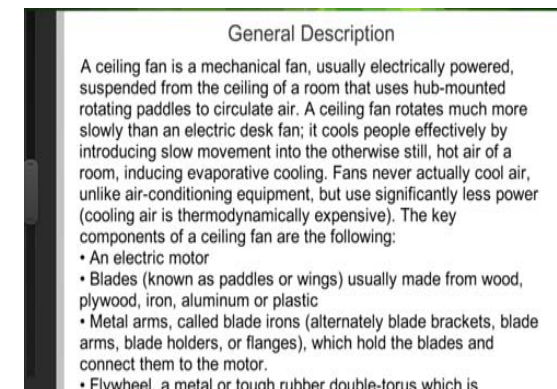
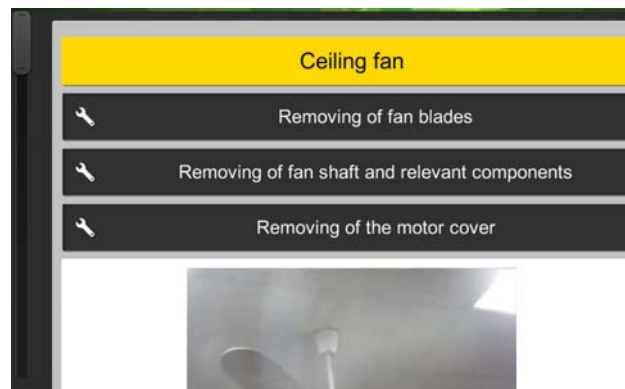
- Ability to disassemble in 3D view each device in various parts
- Information for the various common parts such as motherboards or circuits



Interactive 3D Platform



- Simple in its use
- Friendly User Interface (UI)
- Open Code – Able to develop it further



Technologies incorporated

- * Front-End
 - * Unity3D Game Engine
- * Back –end
 - * MVC .NET application



Piloting the RECDEV Platform

According to the pilot users the RECDEV tool perfectly addresses the following challenges:

- * lack of information from EEE producers regarding dismantling , treatment and location of dangerous substances
- * the personnel fluctuation and the need for repetitive training for the new employees
- * time and efforts required to train new employees
- * offers detailed information on materials and dangerous chemicals



Further development of RECDEV platform

- * Based on the pilot users suggestion, the following opportunities for further development are available:
 - * To include recycling methods of materials and components resulted from disassembling
 - * To add information on value of components and materials would be appreciated
 - * To continuously update the platform with new types of appliances as the market is changing and the resulted WEEE waste is getting more sophisticated

Potential utilization of RECDEV platform

- * WEEE dismantling and recycling companies – to learn about dismantling procedure and steps and get more information on materials and hazardous substances
- * EEE Producers - as source of information in elaboration of legally required guides for users, dismantlers and recyclers
- * Repairing and reuse workshops – to get more information about dismantling, components, materials and substances and develop and extend their activities
- * WEEE Collective Schemes and Associations – for training their members: WEEE producers & importers, and facilitate the use to partner WEEE dismantling and recycling companies



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Thank you for your attention!



Lifelong
Learning
Programme

