Key Action 2 - Strategic Partnership: *Cooperation for innovation and exchange of good practices in Youth.*

Duration of the project: 2 years: 1/10/2018 - 31/09/2020
Submission deadline: 26th of April 2018 (12 pm Brussels time)
Budget available: max. 150.000 euro /per year (including Management/ Staff Cost/ Travels/ Exeptional Costs/ Multiplier Events), based on the flat rate and lump sums established by the Erasmus+ Programme Guide 2017 (*see pag. 131 to 138*)
http://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus2/files/files/resources/erasmus-plus-programme-guide_en.pdf

Peer-to-peer STEM learning for young people via Open Educational Resources (OER) for e-waste reduction
Acronym: [RE-PEER]

A recent study (CWIT, 2012) funded by European Union, discovered that just 35% of used electronic waste is recycled in Europe. Plus, More than 10 times the 400,000 tonnes of e-waste exported - some 4.7 million tonnes - was wrongfully mismanaged or illegally traded within Europe itself. At the same time, little has been done with regards to training young people with regards to raising awareness as well as having STEM skills with regards to creative re-usage/re-cycle of e-waste. One of the overall strategies supported by other European projects has been to focus on social entrepreneurship to reduce tech waste, therefore encouraging entrepreneurial actions. However, we feel that this has misled to interpret the problem. Even though we acknowledge the importance of thinking in an entrepreneurial way – a fundamental approach for young people – before setting any business, one has to assess one's or one's group's capacities on how to practically act on e-gadgets. Many studies and scientific researches launch the alarm of a 'lost generation' indicating the Z generation meaning that it fails to have any practical skill/competencies to interpret, repair or fix any e-gadget, preferring instead to buy new technological items, therefore unconsciously contribute to the augmentation of tech waste, due to their structural lack of STEM competencies.

RE-PEER project [Peer-to-peer STEM learning OER for e-waste reduction] aims to:

- Raise awareness on WEEE (waste electrical and electronic equipment) recycle, repair & reuse, focusing on the European directives and consumers possibilities (WEEE Directive 2012/19/EU) through a practical guidance step-by-step booklet for youth organisations capacity-building [O1];
- Design, develop, implement, evaluate and validate an innovative learning course focused on e-gadget repairing, reusing & repairing through STEM practical approach & robotics practice to introduce young people/teenagers (14-16) to practical activities on tech waste.

More specifically, young people will work through two basic modules, one focused on electro-technical circuits & logical codes, as well as on basic robotics for young people [O2];

- Reinforce the skills/competences of youth workers of digital-oriented organisations through the creation of a training course (C1), with a specific focus on ecological consequences & practical skills in terms of re-usage and recycle of WEEE.
- Set up an e-learning platform to contain training material for youth workers and final users (young people) connected to an open badge system for the recognition of formal and non-formal skills acquired [O3];
- Develop a STEM summer school (C2) with a practical laboratory in WEEE reuse/repair/recycle, fostering also the possibility for young people to share thoughts and to co-create creative and sustainable solutions toward the promotion of a social entrepreneurship mind-set. Such a learning moment is focused on transferring relevant competencies on STEM and on practical everyday usage, also to reflect on local problems and how to counteract. During the STEM summer school, young people will show their local projects and ideas – the best ones will be rewarded with a RE-PEER badge.

A transnational approach is needed in order to tackle a shared European problem and make a sustainable solution from the youth perspective, encouraging young people to be 'makers', proactively acting at local and European level. Furthermore, the project focuses on encouraging STEM learning by young people, with a particular focus on girls, supporting them in having hands on practical aspects of technological items and discouraging just a consumption-oriented behaviour.

- **Intellectual Outputs:**

In order to concretely empower adults in their everyday life, RE-PEER project wants to create:

O1**:** practical guidance step-by-step booklet for youth organisations capacity-building & networking campaign
This is intended to be as a handbook to capacity-build youth organisations on how to start e-waste collection, how to set up local strategies, which kind of knowledge and organisational structure is needed, as well as legal framework and funding lines exist
O1.1 Definition of the framework and working objectives of the involved volunteers & organisations
O1.2 Step-by-Step strategy of the youth organisation work for young people
O1.3 Networking, local and European initiatives to guarantee sustainability and capacity-build organisations
O1.4 How to create a video campaign by involved volunteers & practical realisation
O1.5 Testing in C1 & youth workers feedback for final review

O2 More specifically, young people will work through two basic modules, one focused on electro-technical circuits & logical codes, as well as on basic robotics for young people
O2.1 Definition of the learning framework in electro-technical circuits & logical codes (planned EEE obsolescence, exploitation of environmental resources, child labour, eco-mafias, object, land pollution, etc.)
O2.2 Definition of the learning framework in robotics for young people (usage of Arduino & Scratch robots)
O2.3 Creation of learning material in electro-technical circuits & logical codes;
O2.4 Creation of learning material in Arduino usage robots & WEEE compatibility;
O2.5 Testing in C1/C2 & youth workers feedback for final review + translation

O3: Web-platform for STEM learning about WEEE and basics of robotics
O3.1 Design and discussion of the platform (queries, personal profiles, educational quests etc.) via Moodle structure;
O3.2 Upload of the educational material & blended-learning guidance of the platform
O3.3 C2 testing of the platform through STEM summer school

C1: mobility of staff (2 people per each partner). To be established
C2: mobility of young people (14-16 year-old students) – 3 people per partner. Italy

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Partners: max 5

Estimated budget for intellectual outputs:
IO1: €3-4thousand per partner
IO2: €5-7 thousand per partner (included translation)
IO3: €1-2 thousand per partner + €6thousand for the leading partner

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4 project meetings (according to the E+ budget distribution)

Partners requirements:

- Previous experience in STEM teaching/education (coding, robotics, Arduino/Scratch/Edison robots) & relevant staff;
- Willing of sending students to Italy for C2;
- Willing of hosting a C1 activity;
- Willing of being a coordinating partner (*optional*).

To be part of the project, please send a mail to m.decave@futurodigitale.org sending your PIF module (download it at this link) by 10.04.2017 12pm.