



A circular economy approach for lifecycles of products and services

D2.6: Report on recycling and reusing activities, including feedback from the staff and quantities of collected WEEE

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Summary

Deliverable 2.6 “Report on recycling and reusing activities, including feedback from the staff and quantities of collected WEEE” is a deliverable of Work Package 2 “Collaborative recycling/reuse”, delivered from the Task 2.6 “End-user awareness for reusing/recycling”. This task is focused on motivating CE (Circular Economy) of electronic devices and wastes through awareness in the schools. For achieving this objective, the following tasks have been carried out:

1. Selection of educative centres in Getxo municipality (Basque Country, Spain) for both awareness in schools and Demonstration activities to be performed within Task 6.3.
2. Development of the training material and general design of the educative process
3. Execution of the training process, including organizational meetings with teachers

The development of the task required multiple meetings with institutions of the Getxo City Council, such as its Department of Environment, and its Environmental Classroom (the municipal organization that coordinates the agenda of schools adhered to environmental programs), as well as with schools, selected on the basis of criteria specified in Section 2 of this deliverable and their acceptance to participate in CIRC4Life. At the same time and according to the results of these meetings, several of which have been carried out under the co-creation working model based on the Living Lab concept of Work Package 7, awareness days and educational materials have been designed.

As part of the implementation process, sessions have been held with the teachers of the schools and all the significant materials are available, but conducting the sessions in the schools has been impossible to do for the M18 given that the schools are at the end of their holiday period. It was accepted by the Project Management Board that the activity will be performed together with Task 6.3 of CIRC4Life.

Table of Contents

Summary	1
Table of Contents.....	2
Table of Figures.....	3
List of Tables.....	3
Acronyms and abbreviations	3
1 Introduction	4
2 Selection of Schools.....	5
3 Outline of the awareness activity and the educative material	8
3.1 Introduction	8
3.2 Outline of the general activity in the school.....	10
3.3 Materials for the awareness session	11
3.3.1 Presentation for teachers.....	11
3.3.2 The Capacity Building Session in the D-day.....	11
3.3.3 The Remanufacturing activity in the vocational school	12
3.3.4 Presentation for students.....	12
4 Conclusions	14
5 References	15
Appendices.....	16

Table of Figures

Figure 1 - Getxo's schools within the Environmental Scholar Agenda XXI	6
Figure 2 – 6 th June 2019 meeting held with San Nikolas and Santísima Trinidad schools, Getxo's Environmental Classroom, and Basque Government representative	9
Figure 3 – Central Slides for the presentation for teachers	11
Figure 4 – Module for Sustainable Consumption	12
Figure 5 – Module (draft) for students' presentation	13

List of Tables

Table 1 - Meetings held for the implementation of the selection of schools and the design of awareness-raising days	5
Table 2 - Summary of the state of the selection of Getxo's schools	7
Table 3 - Proposals made to the schools for the awareness activities (questions directly asked to schools are in red and italics)	8
Table 4 – Feedback obtained for the outline of the activity	9
Table 5 – General Outline of the activities in the schools with primary and secondary education	10
Table 6 – General Outline of the activities in the vocational training school Ibaiondo	11

Acronyms and abbreviations

Abbreviation	Description
CE	Circular Economy
E.C.	European Commission
EEE	Electrical and Electronic Equipment
EU	European Union
WEEE	Waste of Electrical and Electronic Equipment

1 Introduction

The E.C. recognises already in the seminal document on CE in the EU, 'Closing the circle: an EU action plan for the circular economy', the importance of informed consumption, as the decisions of millions of consumers, determined among other factors by the information to which consumers have access, may have repercussions in support of or to the detriment of the CE. More specifically, the document recognises that, for reducing the amount of household waste, awareness campaigns (and economic incentives) have proven to be particularly effective [1].

Task 2.6 of the CIRC4Life Project proposes to carry out this awareness specifically in different educational centres in the municipality of Getxo (Spain), considering the relevance of education in the environmental training of future citizens who are aware of sustainability and CE. CIRC4Life also allows students to participate directly in the practical collection process, as well as attending practical remanufacturing sessions for electronic tablets.

The regional government of the municipality of Getxo (the Basque Government) has an educational programme for the sustainability and quality of the educational centre (*Agenda XXI Escolar*). It is based on the participation of the community, intervening and collaborating with the sustainable development of the municipality. As an Environmental Education programme, its aim is to develop knowledge, skills, attitudes, motivation and commitments to take part in solving environmental problems [2]. The existence of several educational centres participating in this educational programme of the Basque Government in this municipality has been an important factor in the selection of Getxo as a municipality in which to carry out the demonstration Task 6.3 (Demonstration of CEBM with tablets) of CIRC4Life Project.

It is not always easy to transfer knowledge and situations from the recycling industry to schools, especially in primary and secondary schools. The aim of this task is to make the CE of electrical and electronic devices understandable and attractive for European citizens in the future, by means of appropriate educative materials and practical work sessions with students, following a methodology easy to be replicated in other educational environments, thus favouring the exploitation of the results of the Project. Given that, in addition, work is carried out in a practical environment with the presence of the intelligent container in the school during the education process, the task contributes to developing the Business Model of Collaborative Recycling and Reuse (WP2) in which it is included, with the possibility of the schools being a potential WEEE collection centre for the students' families.

2 Selection of Schools

Both for the selection of schools in the municipality of Getxo and the design of the awareness day in the schools, a series of meetings to present proposals and collect impressions and opinions have been carried out, with the aim of rendering the results presented. Table 1 shows the dates and attendees of the partners and external stakeholders of these meetings.

Meeting Date	Attendants	Objectives and Agreements
28/02/2019	Getxo Council, Indumetal, Recyclia and CIRCE	<ul style="list-style-type: none"> - Presentation of the chronogram with the activities to be carried out in Getxo - Acceptation of collaboration and supply of the information and data required
15/04/2010	Getxo's Environmental Classroom, Indumetal, and Recyclia	<ul style="list-style-type: none"> - Presentation of activities related to schools - Proposal of three schools and first contact with schools
06/06/2019 20/06/2019 24/06/2019	San Nikolas, Trinitarias, Ibaiondo and Zabala Schools, and Indumetal	<ul style="list-style-type: none"> - Presentation of the activities and feedback of schools. Co-creation of the working day.
11/07/2019	FairPhone local angels and Indumetal	<ul style="list-style-type: none"> - Outline of a remanufacturing activity

Table 1 - Meetings held for the implementation of the selection of schools and the design of awareness-raising days

Getxo's Environmental Classroom is a facility dependent on Getxo City Council, the main objective of this facility is to raise environmental awareness and the sustainable development of Getxo's environment through the educational programme and an extensive programme of activities. The Environmental Classroom remains in continuous contact with the responsible staff for the environmental agenda in the schools listed in the School Agenda XXI (*Agenda XXI Escolar*).

Figure 1 shows the map of Getxo including the different schools adhered to the School Agenda XXI, their geographical location in the municipality and the education type of the centre.

It can be seen that Getxo has enough schools in different areas of interest, from uninhabited neighbourhoods to the city centre. The schools that offer primary education exclusively tend to be the smallest, and in this sense their interest is lower due to the smaller number of people who could end up participating in the project. This opens up the possibility of working with schools with other educative grades, where schools receive a greater number of students, especially secondary and baccalaureate students. In Getxo's Environmental Classroom, it was also advised, according to their educative experience, to increase the number of participating students to a greater number of ages, and thus approach students who may already be consumers.

It is remarkable the presence of an educational centre of vocational education, CFP Ibaiondo. It is a specifically interesting school, since some of the educational programs they offer are related to the computer science. Thus, Ibaiondo can be especially interesting and their participation in the project was considered in addition to the three schools initially proposed.

Therefore, the criteria used to make the selection of schools, agreed with the Getxo's Environmental Classroom, were:

- the number of pupils, related to the fact that the school offers different levels of education.
- geographical distribution in the city.
- integration into the project activities by the vocational school.

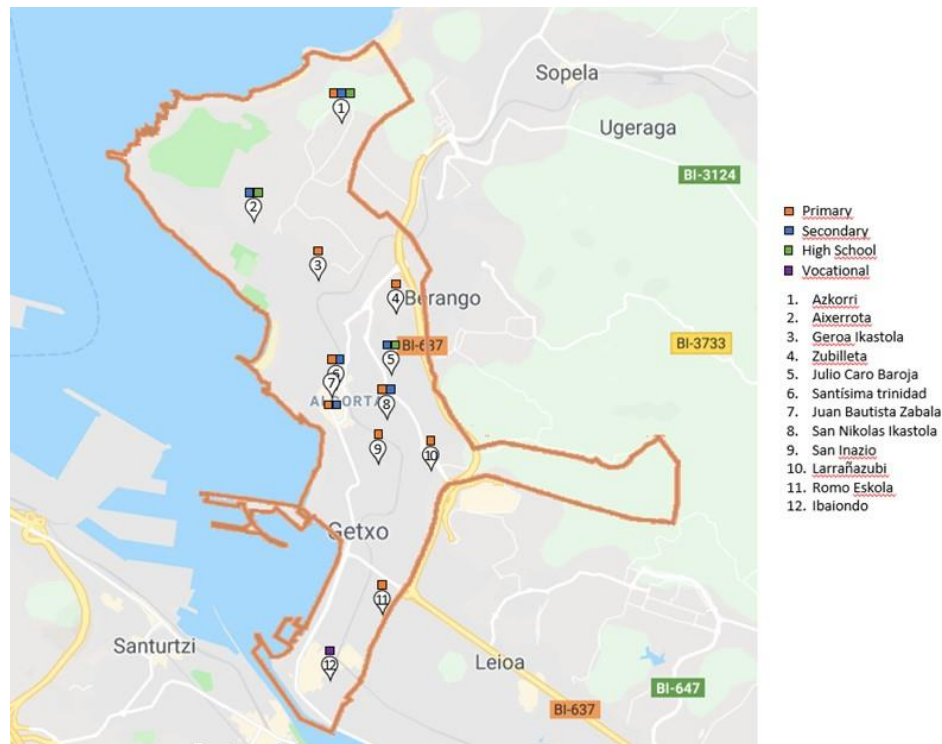


Figure 1 - Getxo's schools within the Environmental Scholar Agenda XXI

The schools finally chosen are presented in Table 2. As it can be seen, several of the schools have already expressed their willingness to participate. In others, however, their confirmation is pending. This is due in part to changes of responsible staff for the next school year, and in part to the very identification of the final date on which the awareness-raising activity will take place, which must also be combined with the demonstration activities and its own needs.

School	Characteristics	Objectives and Agreements
CEIP ROMO 	https://sites.google.com/a/romoeskola.com/romoeskola/ Primary Education Close to a High School External neighbourhood of great population	New Environmental responsible for 2019-2020. It is necessary to contact again in September 2019
IKASTOLA SAN NIKOLAS 	https://www.sanikolas.eus/es Primary and Secondary Education Centre of the city	They took part in the co-creation activity (6 th June 2019) for the outline of the working-day in the schools Information received. Answer to be expected.
SANTÍSIMA TRINIDAD 	https://www.trinitariasalgorta.net/ Primary and Secondary Education School of great tradition in the city centre	They took part in the co-creation activity (6 th June 2019) for the outline of the working-day in the schools Information received. Answer to be expected.
COLEGIO ZABALA 	https://sites.google.com/a/zabalaeskola.es/zabalaeskola/ Primary and Secondary Education Centre of the city	Visited on 24 th June 2019 They have accepted to take part in the activity
COLEGIO BAROJA 	http://www.juliocarobaroja.hezkuntza.net/web/guest Secondary Education and High-School	It is necessary to contact again in September 2019
ESCUELA IBAIONDO 	http://www.ibaiondo.net/index Vocational School in a suburbia	Visited on 20 th June 2019 They have accepted to take part in the activity
COLEGIO AZKORRI 	http://www.azkorri.com/es/ar/1/inicio.html Primary, Secondary and High-School A great number of students in a rural area of the municipality	New Management in 2019-2020 educative year. It is necessary to contact again in autumn 2019

Table 2 - Summary of the state of the selection of Getxo's schools

3 Outline of the awareness activity and the educative material

3.1 Introduction

Table 1 shows the different meetings held so far with the selected schools. Proposals for actions have been made in these meetings, and the corresponding feedback has been received from the schools in this respect. On the other hand, Table 3 lists the direct proposals made to the schools, as well as the cases in which their response is essential for designing the awareness-raising activity.

PROPOSAL FOR ACTION	POSSIBILITIES AND QUESTIONS
INTELLIGENT BIN installation in the school	<ul style="list-style-type: none"> -The bin needs access to electricity and a place under a roof. -It has to be accessible to install and uninstall it, and to empty it. -It is necessary at least a person to be trained in the management of the bin and to be a contact person in case of incidents. <i>-The container would be in the school for a 2-4 weeks period</i>
Realization of TRAINING ACTIVITIES IN THE SCHOOL	<ul style="list-style-type: none"> <i>-Half hour session with a course in a classroom or a large class:</i> general on waste and sustainable consumption -Later visit to intelligent container, in its place of placement, and practical realization of example <i>(another half hour):</i> specific session on the container and the incentives for the school <i>-It can be done with a maximum of three courses in one morning</i> <i>-Ages or courses to be decided: preferably primary</i> <i>-Suggestion on training materials to be prepared</i>
COLLECTION of materials and containers	<ul style="list-style-type: none"> Materials would be collected every two weeks by Indumetal At the end of the project period at the school, the bin would be removed.
Application of INCENTIVE	<ul style="list-style-type: none"> The project is developing a system of economic incentives (discounts) for each individual user. However, the application of these incentives is not considered appropriate for students (also for data protection). <i>A single user of the system per school is proposed, and a single 'competitive' incentive per school, with a prize for the greatest 'recycler'. Example: possible excursion to a recycling centre</i>
REUSE of electronic tablets	<ul style="list-style-type: none"> <i>If the school uses Electronic Tablets in its teaching activities, it may consider offering collected and reconditioned tablets in the project for the school. Can it be interesting?</i> <i>Specifications of the tablets that are normally used to find out if the school's requirements can be met are necessary</i>

Table 3 - Proposals made to the schools for the awareness activities (questions directly asked to schools are in red and italics)

The meetings with the different educational centres have been carried out using different methodologies. Initially, a working day was designed following co-creation methodologies (Tasks 7.1 and 7.2 of WP7) for the 6th June 2019 meeting: the call however was not widely answered, and only two schools attended (and only the responsible person on environmental issues of the school, Figure 2). It was therefore decided to try individual visits to each school that would allow for a more personal presentation and a better detection of the needs of each school, since, generally, the school's managers were also taking part in the meeting.



Figure 2 – 6th June 2019 meeting held with San Nikolas and Santísima Trinidad schools, Getxo's Environmental Classroom, and Basque Government representative

After presenting the *Proposals for action* detailed in Table 3 to the schools, the feedback obtained in the different meetings is summarized in Table 4.

PROPOSAL FOR ACTION	Schools' feedback
INTELLIGENT BIN installation in the school	<ul style="list-style-type: none"> - A school shows concern about the possible electrical consumption of the container. - Two schools propose to have the container in the school a couple of weeks before the day of the awareness, in order to generate in advance an interest in the students, although the container is not working yet. Another proposal to create interest is to have the container a couple of weeks before the D-day, but keep it covered to generate surprise. - A school thinks that the container should be in the school for the DEMO more than 4 weeks. - A school suggests to carry out the activity from the first week of January, to take advantage of the possibility of discarding electrical and electronic waste replaced by Christmas gifts.
Realization of TRAINING ACTIVITIES IN THE SCHOOL	<ul style="list-style-type: none"> - Schools do not know how to decide if it is better to do the activity in primary or secondary school. In primary school there may be more access to devices at home, in secondary school they may already be consumers and awareness may be more effective. The proposal is not to reject any group if the school thinks it is appropriate: final ages and number of students depend on each school. - The vocational education centre (Ibaiondo) accepts to carry out a remanufacturing workshop in their facilities and with their students, working with Indumetal experts in the necessary activities for the remanufacturing of tablets and mobiles (destruction of data, disassembly, spare parts, software installation...). They propose it to be carried out soon in the new course, probably in October or November, since the students are still 'fresh' and are more receptive to these activities. - Primary and Secondary schools consider also very interesting to carry out a remanufacturing workshop with students within the training. - No suggestions on training materials to be prepared are made by the schools. - It is suggested that the campaign should distinguish the action of the current white reusable container, which is currently used for clothing, but which can also receive small reusable electronic device. Campaign should be also performed specifically in schools, and it should be brought by students to their homes.
COLLECTION of materials and containers	<ul style="list-style-type: none"> - A school asks about how to deal with those devices carried to the school by the students after the demo, once the container has been moved to another location.
Application of INCENTIVE	<ul style="list-style-type: none"> - Schools agree that an incentive per student is not adequate, for not encouraging individual consumerism and for data protection.
REUSE of electronic tablets	<ul style="list-style-type: none"> - Two schools do not really understand the possibility and they have to check it out. - A school agrees to share specifications.

Table 4 – Feedback obtained for the outline of the activity

Finally, a meeting was held with two collaborators of the Fairphone Angels network [3], who had previously carried out a workshop on dismantling mobile phones in a vocational training centre in the Basque Country. The activity focused on the disassembly of compact mobile phones, with an explanation of the different fractions present in the mobile and their segregated collection for recycling, and of Fairphone phones. They have no experience in tablets, but they have developed a methodology and an illustration of the needs of the potential remanufacturing day that they have offered to the project.

3.2 Outline of the general activity in the school

As a result of the meetings with schools and stakeholders, several key points have been identified which don't allow to detail some actions until the day of the training is set. Due to schools' internal planning process extra-curricular events have to be planned two months in advance.. Taking into account these aspects and the summer holidays, an outline of the working-day in the school has been developed and it will be proposed for the schools before the activity is initiated. After that, individual specifications will be collected for necessary small changes. Table 5 shows the outline for the primary and secondary education schools

Time	Action
2 months before D-day	Contact with the Executive Management of the schools Setting the Final D-day date
1 month before D-day	Visit to the school. Location of the container installed. Number of students/courses fixed
2 weeks before D-day	Installation of the bin (bin covered)
1 week before D-day	Meeting with teachers
D-day (actions probably to be repeated 3 times with different groups)	<ol style="list-style-type: none"> In the classroom/theatre in the school <ul style="list-style-type: none"> ✓ The Circular Economy (5 mins) ✓ Sustainable Consumption (5 mins) ✓ What are we doing today? (10 mins) ✓ Disassembling a tablet! (15 mins) In front of the bin: <ul style="list-style-type: none"> ✓ Discovering of the bin (5 mins) ✓ How does the bin work? (15 mins) ✓ Reward/Incentive (5 mins)
2 weeks after D-day	Collection of the waste
4 weeks after D-day	Collection of the waste Removal of the bin
8 weeks after D-day	Results. Announcement of the winner of the reward

Table 5 – General Outline of the activities in the schools with primary and secondary education

As it has been mentioned before, besides the primary and secondary schools, a vocational training school has been included for the awareness activities. Considering the focus group, the program to be taught is a bit different and more focused on their needs. The outline for Ibaiondo is showed in Table 6.

Time	Action
1 month before D-day	Contact with the school. Setting the Final D-day date. Number of students fixed.
1 week before D-day	Meeting with teacher(s)
D-day (actions probably to be repeated as many times as possible in a morning with different 6-8 people groups)	Disassembling and remanufacturing a tablet (15 mins): <ul style="list-style-type: none"> ✓ Disassembly of a tablet. Safety issues ✓ Description of its elements and their current end of life ✓ Legal considerations (e.g. batteries, data protection) ✓ How to remanufacture and reuse? Assembly

Table 6 – General Outline of the activities in the vocational training school Ibaiondo

3.3 Materials for the awareness session

Taking into account the different key actors and focus groups, several materials have been developed in order to teach the awareness sessions. In the following sections, a summary of these materials is detailed while the full documentation is attached in the Appendices.

3.3.1 Presentation for teachers

Teachers are a key point for this activity. If teachers have a clear idea of the project and understand the main concepts, higher ratios of cooperation and interactions, during and after the sessions, will be obtained. With the aim of presenting the project in an easy and understandable way, the material highlighted in Figure 3 has been developed.

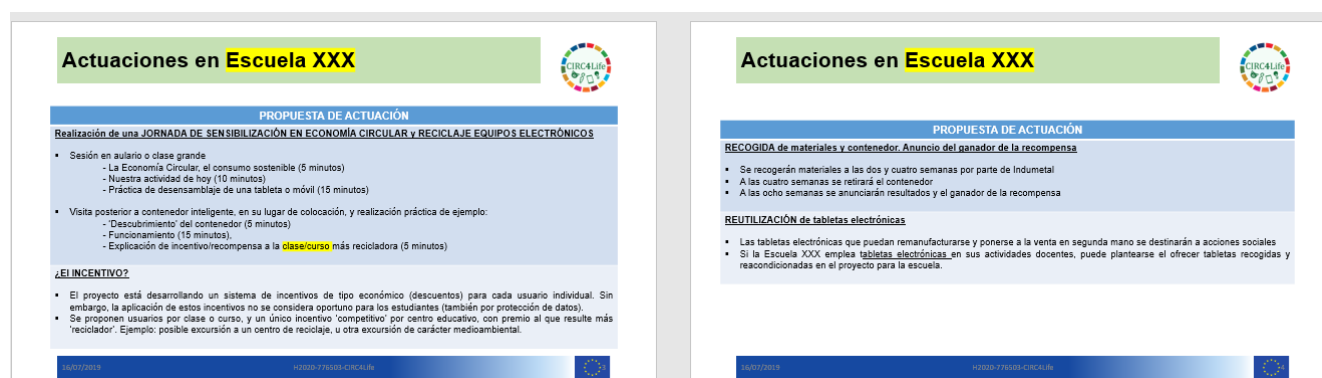


Figure 3 – Central Slides for the presentation for teachers

3.3.2 The Capacity Building Session in the D-day

Task 3.4 (Informative and Awareness campaign for Sustainable Consumption) includes a module for schools about sustainable consumption that will be implemented during the classroom-located activities in the D-day. Task leaders teams of Task 2.6 (IND) and 3.4 (CIR) have worked altogether in the distribution of time and contents for the Capacity Building Session, which will include key messages such as *Guidelines for Purchase and Conservation and Consumption*.

Figure 4 shows a snapshot of the material prepared for this part of the D-day, which it is named in section 3.2 and more specifically, in Table 5 as “Sustainable Consumption” module. The full information about this module will be detailed in the Deliverable 3.2, linked to Task 3.4 of the project.



Figure 4 – Module for Sustainable Consumption

3.3.3 The Remanufacturing activity in the vocational school

The remanufacturing activity in primary and secondary schools will be conducted in a masterly manner, with the whole class or course attending disassembly tasks. However, in the vocational school, enrolled students are already studying computer-related subjects, so a more content-rich activity is proposed in collaboration with the school. The activity will be based on the experience of remanufacturing workshops shared by Fairphone and the experience of IND in remanufacturing.

It is not considered necessary to prepare any material in advance for these sessions, since the main value lies precisely in working with experts in the physical elements to which the students will have access.

The necessary tools for the activity will be provided by IND, in collaboration with the vocational school. The tools will include:

- Drivers and wrenches
- Cutting tools
- Tools for prying and opening
- Gripping tools
- Soldering and Wiring
- Measuring tools
- Inspection tools

3.3.4 Presentation for students

The aim of the presentation for students is to teach them what the container is for, what kind of equipment can be collected, and the type of incentive available for them in case that they collect the highest number of WEEE and therefore the highest amount of eco-credits. For that, it is proposed to prepare a very simple, practical and visual material, including various photos, videos and real examples.

Although a first version of this material is attached in this deliverable, this cannot be considered as finished until details of the final participating schools will be available. Additionally, the following requirements have been identified as complementary for the material:

- Photos of the smart container once installed in the school (but before the D-day).
- Visual demonstration on how opening the container and what the open container looks like.
- Visual demonstration on how packaging the delivered electrical appliances in order to promote and benefit the potential remanufacturing activities.

Finally, schools, classes and courses may have particularities which should be considered in the final version of the material, so small changes may be assumed, although not expected to be significant.



Figure 5 – Module (draft) for students' presentation

4 Conclusions

Task 2.6 has been focused on motivating Circular Economy of electronic devices and wastes through awareness in the schools. For achieving this objective, some activities have been described in this document and some conclusions can be pointed out:

- The public administrations (in this case the Basque Government and Getxo City Council) consider it a good idea to work with educational centres and bring the environmental knowledge of companies and industries to schools.
- All the educational centres have collaborated in the design of the training day, of the previous necessary activities, and in the description of the internal needs of each centre. Besides the primary schools originally contacted, the possibility of working with a secondary school and, especially, with a vocational school specialising in computer education has been added.
- The D2.6 description in the GA requests the report of WEEE collection results during the training day in the schools, however this information is not available at the time of D2.6 submission (M16). Due to an erroneous definition of the task 2.6 duration, this finishes when the WEEE collection system is not implemented yet. The performance of WEEE collection activities relies on the functions of intelligent bin and eco-account functions of the mobile app, which are the outcomes of Task 2.3 - ICT based reuse/recycling systems and Task 3.3 - Consumer eco-cost account, respectively. These two tasks will be completed at M18. This mismatch prevented the practical use of collection containers, and leads to a consortium agreement for the performance of the WEEE collection activities in the Task 6.3 - Demonstration of CEBM with tablets, and therefore for reporting the WEEE collection results in the Deliverable 6.2 (Linked to Task 6.3).
- The activities in the schools will be carried out in conjunction with the demonstration phase in Task 6.3. The necessary educational materials have been prepared for this, including also the sustainable consumption module of Task 3.4, although they need the specific details of the schools (location of containers, for example) to be completed.

5 References

- [1]: European Commission [2015]. Closing the loop - An EU action plan for the Circular Economy. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels, 2.12.2015, COM(2015) 614 final. Available on-line at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52015DC0614&from=ES>
- [2]: Basque Government [2019]. 'AGENDA 21 ESCOLAR - Educar para la sostenibilidad'. Available on-line at: <http://www.euskadi.eus/agenda-21-escolar-educar-para-la-sostenibilidad/web01-a2inghez/es/>
- [3]: <https://www.fairphone.com/en/community/organize-an-event/>

Appendices

TEACHER'S PRESENTATION



EU H2020 project

**CIRC4Life: A circular economy approach
for lifecycles of products and services**



Proyecto CIRC4Life

Presentación del proyecto y aplicación en **la escuela XXX**






Mes de 2019
Escuela XXX

Proyecto CIRC4Life

Objetivos del proyecto




El Proyecto CIRC4LIFE persigue desarrollar e implementar un nuevo enfoque de economía circular para aplicarlo en distintos tipos de productos y servicios sostenibles.

Project Title	A circular economy approach for lifecycles of products and services
Project Acronym	CIRC4Life
Project Number	776503
Starting Date	01/05/2018
Duration in months	36
Call (part) identifier	H2020-CIRC-2017TwoStage
Budget	7.228.773,75 €


PARTNERS	COUNTRY
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KOSNIC LIGHTING LIMITED	United Kingdom
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SWEREA IVF AB	Sweden
DELEGATION EUROPEENNE DE MAKE MOTHERS MATTER	Belgium
ONA PRODUCT SL	Spain
INDUMETAL RECYCLING, S.A.	Spain
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24/07/2019

H2020-776503-CIRC4Life




Actividades a desarrollar en Getxo




ACCIONES

1. Prueba piloto en Getxo que incluirá:
 - Colocación de **contenedores** inteligentes
 - Implantación del sistema de **incentivos** desarrollado en el proyecto
 - Implantación de un sistema de reutilización y **remanufactura** de tabletas electrónicas
 - Integración de la información en una **app para usuarios**
 - Consideración de las escuelas como usuarios de tabletas electrónicas reutilizadas
2. **Concienciación y educación** en las escuelas de Getxo, para motivar e incentivar de un modo atractivo la economía circular de aparatos y residuos electrónicos
3. **Campaña** de información y sensibilización en Getxo

24/07/2019
H2020-776503-CIRC4Life



Actuaciones en Escuela XXX




PROPUESTA DE ACTUACIÓN


Instalación de CONTENEDOR INTELIGENTE

- Aparato ya instalado en **XXX**. Tiene electricidad, en lugar bajo techo, seguro y accesible
- Estará un mes a partir del día de formación, el **xx de yy de 20xx**
- Lo preferible es que lo maneje un responsable por **clase/curso**. Necesita descargarse la app para funcionar
- El contacto en caso de incidencias es INDUMETAL RECYCLING (944710165, Attn. Maider)





- Resguardo de la operación para el usuario (uno por cada **clase/curso**)
- Etiqueta para pegar en el equipo
- Conocimiento y trazabilidad del usuario
- Funcionamiento a base de tarjetas personalizadas (una por cada **clase/curso**)

24/07/2019
H2020-776503-CIRC4Life


Equipos implicados



- Tabletas electrónicas: con más incentivo si pueden reutilizarse
- Teléfonos móviles
- Otros pequeños equipos electrónicos con pantalla: ordenadores portátiles, libro electrónico, marco fotográfico, consolas, relojes electrónicos, etc...
- Posibilidad de empaquetamiento
- ¿Otros pequeños equipos electrónicos? Se admiten, pero se incentivan mínimamente
- Si los objetos no son equipos eléctricos o electrónicos, no se incentivan

24/07/2019

H2020-776503-CIRC4Life



Actuaciones en Escuela XXX



PROPUESTA DE ACTUACIÓN

Realización de una JORNADA DE SENSIBILIZACIÓN EN ECONOMÍA CIRCULAR Y RECICLAJE EQUIPOS ELECTRÓNICOS

- Sesión en aula o clase grande
 - La Economía Circular, el consumo sostenible (5 minutos)
 - Nuestra actividad de hoy (10 minutos)
 - Práctica de desensamblaje de una tableta o móvil (15 minutos)
- Visita posterior a contenedor inteligente, en su lugar de colocación, y realización práctica de ejemplo:
 - 'Descubrimiento' del contenedor (5 minutos)
 - Funcionamiento (15 minutos),
 - Explicación de incentivo/recompensa a la **clase/curso** más recicladora (5 minutos)

¿EL INCENTIVO?


- El proyecto está desarrollando un sistema de incentivos de tipo económico (descuentos) para cada usuario individual. Sin embargo, la aplicación de estos incentivos no se considera oportuno para los estudiantes (también por protección de datos).
- Se proponen usuarios por clase o curso, y un único incentivo 'competitivo' por centro educativo, con premio al que resulte más 'reciclador'. Ejemplo: posible excursión a un centro de reciclaje, u otra excursión de carácter medioambiental.

24/07/2019

H2020-776503-CIRC4Life



Actuaciones en Escuela XXX




PROPUESTA DE ACTUACIÓN

RECOGIDA de materiales y contenedor. Anuncio del ganador de la recompensa


- Se recogerán materiales a las dos y cuatro semanas por parte de Indumetal
- A las cuatro semanas se retirará el contenedor
- A las ocho semanas se anunciarán resultados y el ganador de la recompensa

REUTILIZACIÓN de tabletas electrónicas

- Las tabletas electrónicas que puedan remanufacturarse y ponerse a la venta en segunda mano se destinarán a acciones sociales
- Si la Escuela XXX emplea tabletas electrónicas en sus actividades docentes, puede plantearse el ofrecer tabletas recogidas y reacondicionadas en el proyecto para la escuela.

24/07/2019
H2020-776503-CIRC4Life



Protección de datos



**ETHICAL CLEARANCE CHECKLIST FOR
CIRC4Life PROJECT**

PROJECT INFORMATION	
Type of Project	European Commission Horizon 2020
Call	CIRC-01-2016-2017 Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects
Grant Agreement No.	776503
Project Duration	01/06/2018 – 30/04/2021 (36 months)
Project Coordinator	Nottingham Trent University (NTU)
Project Partners	Enviro Data (ENV), Jonathan Michael Smith (JS), Kozmic Lighting Limited (KGL), Centre of Research for Energy Resources and Consumption (CRE), European EMC Competence (EMC), Zenith (ZEN), the Institute for Ecology of Industrial Areas (IEA), SWERGA (VFP AD (DVC), Make Mothers Matter (MMM), ONA PRODUCT (ONA), INDUSTRIAL Recycling (IND), GSI Germany GMBH (G11C), LAUBS University of Applied Science (LAU), CECOP for European Policy Studies (CEPS), Institute of communication and computer systems (ICCS), ReCycle (REC), S.A.T. Allie (ALIA)

- CIRC4Life dispone de un Comité Ético y protocolos respecto a la Protección de datos de los participantes en el proyecto
- CIRC4Life y las empresas que realicen las actividades en la escuela cumplirán las regulaciones en Protección de Datos añadidas que requiera la escuela, y someterán sus acciones a los protocolos de trabajo de la escuela en tema de protección de datos
- El proyecto CIRC4Life no requiere pedir datos personales de ningún estudiante ni profesor o trabajador del centro educativo que participe en el proyecto.
- Existe intención de realizar fotografías de las acciones a realizar en el centro educativo, pero nunca de caras de los estudiantes, y nunca se utilizarán ni publicarán sin el consentimiento del centro educativo

24/07/2019
H2020-776503-CIRC4Life




Eskerrik asko entzuteagatik!



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24/07/2019 H2020-776503-CIRC4Life 

STUDENT'S PRESENTATION

Ikastetxeko edukiontzia

**ARGAZKIA:
ESKOLAKO
DAGOEN
EDUKIONTZI
ESTALITA**



Zertarako balio du



Gailu elektrikoak

BERZIKLATZEKO

eta

BERRERABILTZEKO



Gailu elektriko eta elektronikoak





Edukiontzia barrutik

ARGAZKIA:
ESKOLAKO
DAGOEN
EDUKIONTZI
IREKITA



Zertarako balio du



Hondakin elektrikoak
BERRERABILTZEKO

beharrezkoa da

ONDO PAKETATZEA

ARGAZKIA:
PERTSONA
BATEK
PAKETATUTAKO
TABLETA
IPINIKO DUT
EDUKIONTZIAN



Eta... Saria??

-Emandako gailu-hondakin bakoitza erregistratuta egongo da eta entregatu duen klasea

-Emandako gailu-hondakin bakoitzak puntuak ekoizten ditu. Gailua egoera hobean badago eta berrerabili daitekeenean, puntu gehiago lortzen dira


-Puntu gehien lortzen duen klaseak sari bat izango du




Animatu!
Birziklatu etxean erabiltzen ez diren
etxetresna elektrikoak!

CAPACITY BUILDING SESSION: SUSTAINABLE CONSUMPTION MODULE


¿Qué más podemos hacer en casa
para consumir de forma más
sostenible?



Antes de hacer la compra, revisa lo que hay en la despensa y la nevera. Haz una lista, para comprar sólo lo necesario



Prueba frutas y vegetales menos bonitos, son igual de sanos y están igual de ricos



Compra los productos sólo si piensas consumirlos antes del día que caducan.

En lugar de productos empaquetados intenta comprar productos sueltos o a granel, así puedes elegir sólo la cantidad que necesitas



Al guardar los alimentos, trata de conservarlos de manera adecuada para que duren más tiempo (piensa si necesitan frío, por ejemplo, o pueden estar a en un armario)

Averigua qué alimentos tienen fecha de consumo preferente y cuáles pueden comerse unos días tras su fecha de caducidad

Cuando guardes la compra, pon los viejos delante y los nuevos detrás. Así, consumirás primero los que llevan más tiempo en casa



Utiliza las sobras para otro momento (la cena o al día siguiente)
La fruta que lleva más tiempo en casa, puede servir para hacer batidos

Inventa nuevas recetas para aprovechar la comida que “sobra”

Sírvete pequeñas raciones, podrás repetir las veces que quieras, pero no sobraré comida en tu plato