

Why Families and the Circular Economy?

Seminar on the Role of families in achieving the circular economy EESC, 14 May 2019

CONTEXT

Eurobarometer on attitudes of citizens towards the environment:

94% protecting the environment is*important*87% agree that they can play a role



Why users/ consumers are not more involved in the circular economy?



WHAT IS NEEDED

- Identify Families' **real needs** by involving them (Surveys, Living Labs, Adequate tools)
- Segment Target groups such as FAMILIES and develop tailored solutions
- Gather **Good Practices and Benefits** integrating consumer insights into CE strategies
- Take **Concrete actions** inviting ALL actors to participate and not only top down approach
- Change the **narrative:** make it relevant/accessible/affordable for ALL families



THE PROJECT



circular economy approach for lifecycles of products and service.

THE PROJECT

- Horizon 2020 Call: CIRC-01-2016-2017 Systemic eco-innovative approaches for the circular economy: large-scale demonstration projects
- Aim: to develop & implement a circular economy approach by developing new sustainable products and services in 4 sectors
- **Consortium:** 17 partners from 8 EU countries
- **Budget**: Over 7M Euros including EU funding of 6,3M Euros
- **Duration**: Three year project: (05/2018 04/2021)







This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776503

PARTNERS



MAIN ACTIVITIES



SECTORS AND DEMONSTRATORS







CO-CREATION OF PRODUCTS/ SERVICES MOD

- Bring end-users closer to the design and manufacturing phases by:
 - identifying consumer preferences via Big-data mining product reviews
 - evaluating product specifications and prototypes via Living Labs to customise end-user requirements
 - Innovation camps
- Develop a method to calculate eco-points of products
- Consumer Surveys:
 - Feedback and preferences on the developed products
 - Attitudes and understanding on the eco-point calculation



LIVING LABS

- Framework for involving actual customers and other key stakeholders in a collaborative innovation process including families as potential costumers
- Interative process that facilitates end-users, key stakeholders and partners to cocreate novel solutions for all stages of the CE



CIRCULAR ECONOMY JAM





OVERVIEW OF ECO-POINTS

- Eco-point is a cumulative value which accounts for an aggregate of the environmental and health impacts throughout the product's whole value chain
- Life cycle impact assessment is used to calculate the eco-points of products





APPLICATION OF THE ECO-POINT: ECO-SHOPPING

- To enable consumers to view eco-impacts and sustainable manufacturing information of products using their smartphones
- RFID tags and barcodes embedded in the products placed on shelves to obtain the product's sustainable information, facilitating consumers decision to select more sustainable products



APPLICATION OF ECO-POINTS: CONSUMER'S ECO-ACCOUNT

Products	Eco-debits (via purchasing)	Eco-credits earned (via recycling)	Eco-credit balance
Computer	-18	18	0
Book	-7	0	-7

- <u>Eco-account</u> enables consumers to record and track their daily footprints on environment.
- **<u>Eco-credits</u>**: consumers earn via recycling and reusing the products.
- **Eco-debits** are resulted from purchase, which are offset with eco-credits
- <u>Eco-credit balance</u>: sum of the eco-debits and eco-credits earned, which reflects the consumer's overall impact footprints.



EXAMPLE OF A CONSUMER «TRACKER» TOOL

CIRC4Life Main Menu



Dashboard	Interact	$\Big)$
Products	Recycling	$\Big)$
Incentives	EcoAccount	$\Big)$
Trace Product	System Feedback	$\Big)$

- Integrated Mobile application to help the user navigate and become an actor in the circular economy
- Allowing to take full responsibility for consumption patterns, impacts and use of resources
- Allowing users to become active caretakers of the resources and efficiently manage them in al phases including incentive schemes
- One-stop shop for getting product and usage information, recycling processes, re-use markets, services etc.



SUSTAINABLE CONSUMPTION MODEL

Method to calculate the eco-points of products based on the LCIA approach by:

- Assessing Product Environmental Footprints
- **Traceability solution** to monitor product's sustainability along the value chain
- Supporting end-users and stakeholders to actively implement the circular economy via awareness raising and knowledge sharing activities





COLLABORATIVE RECYCLING/ REUSE MODEL

- Develop a **system** for stakeholders to interact with each other to:
 - Facilitate recycling/reuse of end-of-life products
 - Reduce waste
- Implement the eco-credits awarding scheme to encourage people to recycle/reuse
- Consumer Surveys on :
 - Attitudes to recycling/reuse practices
 - Product End of Life information



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DEMONSTRATOR 1A: DOMESTIC LED

- Development of a lamp with recycled or recyclable components using co-creation: surveys, workshops etc
- Sustainable consumption will be encouraged by showing the eco-points information of the new lamps
- Collaborative recycling: extending the lighting products recycling practices to end users, enabling citizens to separate and recycle the products







DEMONSTRATOR 1B: LED

- Development of a **modular LED** industrial lamp
- Development of a leasing service covering the whole life-cycle of the lighting solution in order to reduce waste and reuse/ recycle/ remanufacture
- Identity consumer's needs by using co-creation approach with potential customer and other stakeholders: Living Labs





DEMONSTRATOR 2: TABLETS

- Defining & demonstrating an efficient collection system for tablet's reuse/ remanufacturing:
 - Integrity of the equipment
 - Traceability
 - Destination of his equipment
 - Reward of user's positive actions
- Design and implementation of an incentive scheme for improving reuse/ recycling
- Work in schools:
 - Source of information for stakeholders
 - Collecting info from potential end-users of reused tablets





DEMONSTRATOR 3: MICROFARMING

Sustainable production to increase value and reduce waste by involving customers by

- Improving community composting
- Developing new food organic products







- Co-creation of **new sustainable** products with consumers
- Encouraging sustainable consumption by providing eco-points
- Fostering recycling via **incentive schemes**







Project Website: www.circ4life.eu





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