Why Families and the Circular Economy?

Seminar on the Role of families in achieving the circular economy
EESC, 14 May 2019
**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/accessibe/affordable for ALL families
circular economy approach for lifecycles of products and services.
• **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)
PARTNERS
With end-users

Collaborative Recycling and reuse

Sustainable Consumption
SECTORS AND DEMONSTRATORS

The demonstrations will be held in the UK (Cornwall and Berkshire Counties) and Spain (Regions of Murcia, Basque Country and Valencia).
**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**
• **Framework** for involving actual customers and other key stakeholders in a collaborative innovation process including families as potential costumers

• **Interactive process** that facilitates end-users, key stakeholders and partners to co-create novel solutions for all stages of the CE
CIRCULAR ECONOMY JAM

• Co-create circular economy solutions for a university

• **Service design** workshop divided into 7 challenges

• 2-day event to share insights, discover new possibilities and develop new ideas around university operations and campus life

• Ideas turned into a plan of actions, concepts and physical prototypes
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

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

<table>
<thead>
<tr>
<th>Products</th>
<th>Eco-debits (via purchasing)</th>
<th>Eco-credits earned (via recycling)</th>
<th>Eco-credit balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>-18</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Book</td>
<td>-7</td>
<td>0</td>
<td>-7</td>
</tr>
</tbody>
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EXAMPLE OF A CONSUMER «TRACKER» TOOL

• **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 all phases including incentive schemes

• **One-stop shop** for getting product and usage information, recycling processes, re-use markets, services etc.
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
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
• 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 customers 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 the 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
DEMONSTRATOR 4: MEAT SUPPLY CHAIN

- 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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