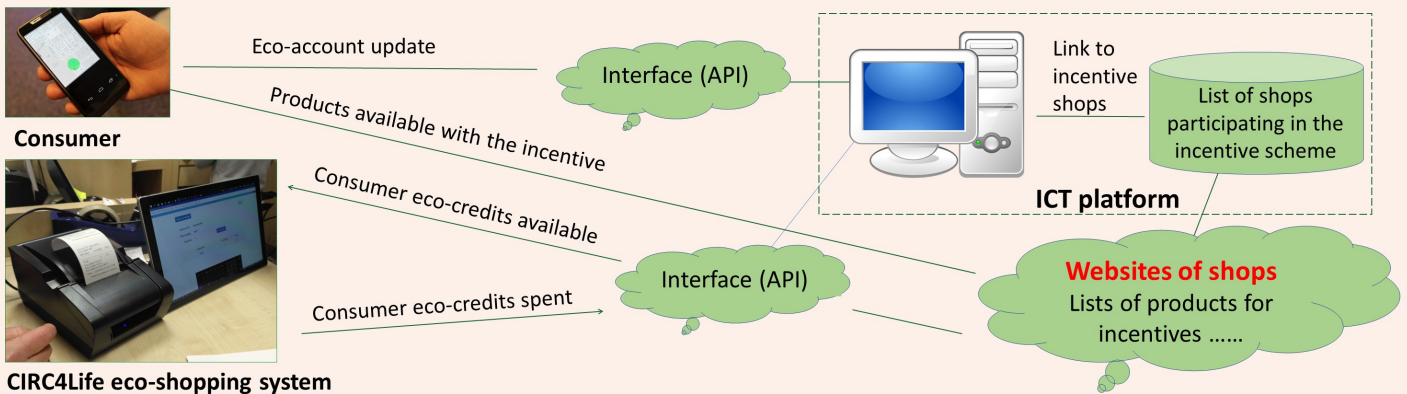


# Eco-incentive Shopping System



H2020 project 'CIRC4Life – A circular economy approach for lifecycles of products and services'

Advanced Design and Manufacturing Engineering Centre, Nottingham Trent University, UK



CIRC4Life eco-shopping system

## Information flow of the eco-incentive shopping system

### Aim:

To develop the Eco-incentive shopping system for the consumer to purchase products with eco-credits in the shop. Eco-credits are converted to the voucher with the exact cash amount, which are applied for paying the discount of the product.

### Overview of consumer eco-account

Products	Eco-debits (via purchasing)	Eco-credits earned (via recycling/reuse)	Eco-balance
computer	-18	16	-2
book	-7	10	3

- **Eco-account** enables consumers to record and track their daily footprints on the environment.
- **Eco-credits:** consumers earn them via recycling and reusing the products.
- **Eco-debits** are generated when purchasing a product, which could be offset with eco-credits
- **Eco-balance:** sum of the eco-debits and eco-credits earned, which reflects the consumer's overall impact footprints.

In the Eco-incentive shopping system, only eco-credits can be used for purchasing goods; Eco-balance shows consumers the environmental footprint of their actions but cannot be used for purchasing.

### Two separate accounting systems

In the shop where the eco-incentive is going to be used, there are two separate systems. The two systems will not interfere each other.



### User-interfaces shown on the eco-incentive shopping computer

Eco-account Account Name: G Smith  
Existing eco-credits total: 40

Discount amount of this purchase:  
Euros Eco-credits

Eco-credits to spend:  
(1 Eco-credit = 1 Euro)

Confirm to pay with the eco-credits

Eco-account Account Name: G Smith  
Existing eco-credits total: 40

Discount amount of this purchase:  
Euros Eco-credits

Eco-credits to spend:  
(1 Eco-credit = 1 Euro)

Confirm to pay with the eco-credits

1. Scan consumer QR code or swiping consumer card
2. Enter the discount amount in Euros. The system automatically converts the discount Euros to eco-credits.

Serial No. 181 Date:25/22/2019, Time: 16:01

Voucher to pay the discount amount:  
Euros Eco-credits

Printing voucher...

Serial No. 181 Date:25/22/2019, Time: 16:01

Eco-credits spent:  
Euros Eco-credits

Eco-account  
Eco-credits before purchase: 40  
Eco-credits spent: -1  
Eco-credits remaining: 39

Printing receipt...

3. Print voucher after confirming the payment with eco-credits
4. Print receipt after confirming the payment with eco-credits

### Eco-incentive Shopping Scheme: discount with eco-credits

#### STEPS

- **Step 1:** The shop accounting system or the shop staff calculates the discount amount of the product(s) to be purchased in Euros.
- **Step 2:** Operation in the eco-incentive computer:
  - The shop staff inputs the discount amount (Euros) to the eco-incentive shopping system.
  - The system converts the Euros into eco-credits, which are then deducted from the consumer's eco-account.
  - Print out voucher with the exact amount of Euros converted from the eco-credits.
- **Step 3:** Complete the purchase in the existing accounting computer
  - The shop staff inputs the amount (Euros) of the voucher into the discount value of the purchase, and keep the voucher as an evidence of payment.
  - The customer pays the remaining amount of the price in cash.
  - Print the receipt of the purchase.



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[www.circ4life.eu](http://www.circ4life.eu)



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