



CIRC4LIFE

RECYCLING AND REUSE AS BUSINESS MODEL

Presented by [...]
[Date]



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

Basic information about CIRC4Life



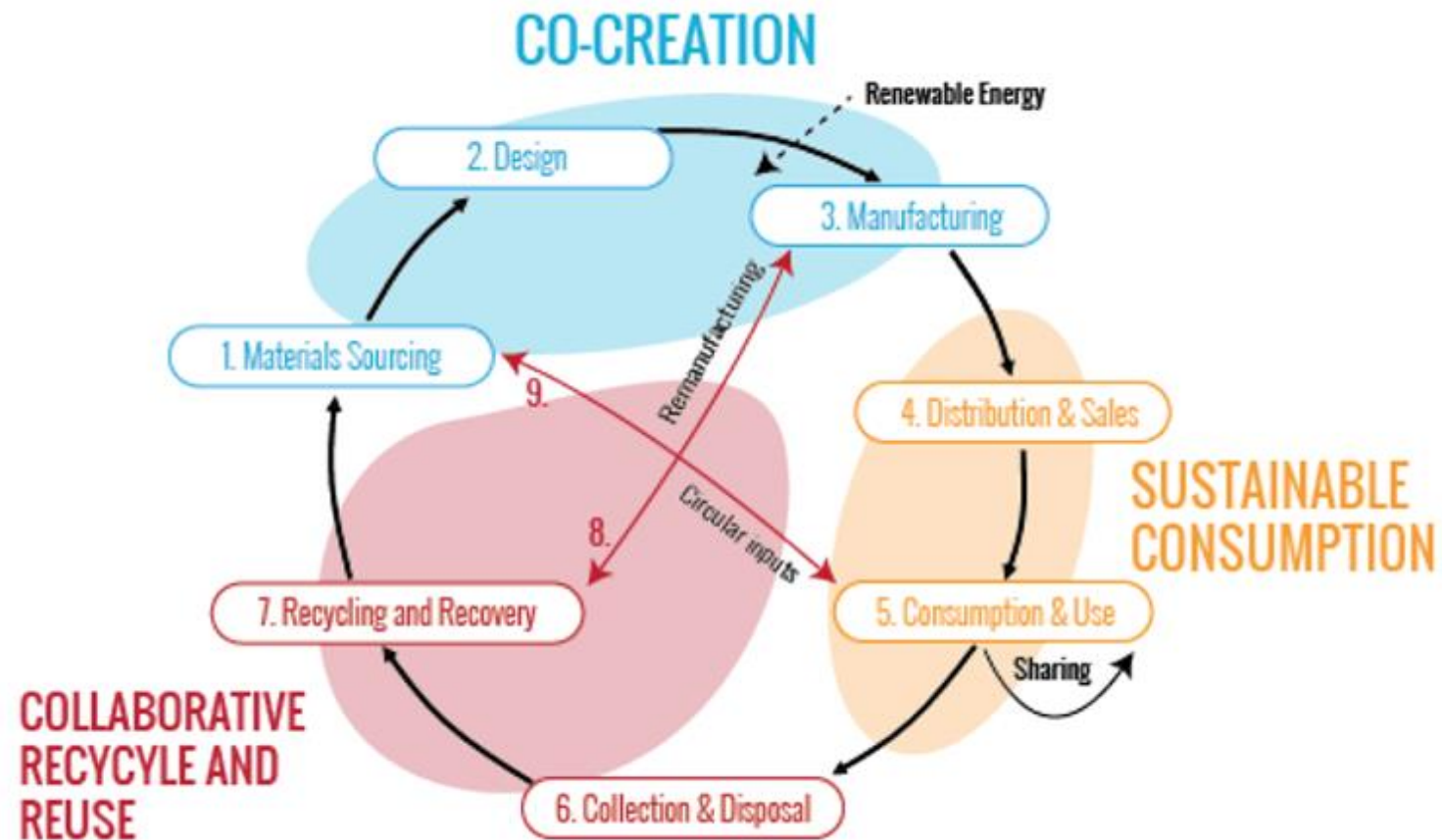
- CIRC4Life is an international collaborative innovation project (May 2018 until April 2021) with the aim to develop and implement a circular economy approach for sustainable products and services through their value and supply chains.
- Coordinator Nottingham Trent University
- Partner organisations

Enviro Data (ENV), Jonathan Michael Smith (JS), Kosnic Lighting Limited (KOS), Centre of Research for Energy Resources and Consumption (CIR), European EPC Competence Center GmbH (EECC), The Institute for Ecology of Industrial Areas (IETU), RISE IVF AB (SWE), Make Mothers Matter (MMM), ONA PRODUCT (ONA), INDUMETAL Recycling (IND), GSI Germany GMBH (GSI G), Laurea University of Applied Science (LAU), Center for European Policy Studies (CEPS), Institute of Communication and Computer Systems (ICCS), Recyclia (REC), S.A.T. Alia (ALIA)

- Content specific for this module tool produced by



BUSSINESS MODELS IN CIRCULAR ECONOMY



REUSE AND RECYCLE BUSINESS MODELS



- The goal of a Circular Economy Business Model should be to extend the lifecycle of the products (e.g. Reusing and Repairing) or to avoid new raw material extraction (e.g. Recycling or Valorisation).
- Reusing/Repairing and Recycling are separate business models (different value chains) connected by means of sorted collection. If something is reusable or repairable it is not a waste. If something is recyclable will be a waste and different regulation is applicable.
- Both will require sorted collection, but the business models could be different (different actors, regulations, incentives, objectives).

REUSE AND RECYCLE BUSINESS MODELS



- Even though the idea behind the business model could be replicable among sectors, circular economy has to face very different regulations.
- Any circular economy business model involving reuse and recycling should be focused on two main issues:
 - Increasing the collection of sorted wastes by means of awareness + incentives
 - Increasing the lifetime of a product by means of co-creation, eco-design, awareness and reparation/recycling



Within CIRC4life project business models for domestic lighting, industrial lighting and WEEEs are being tested.

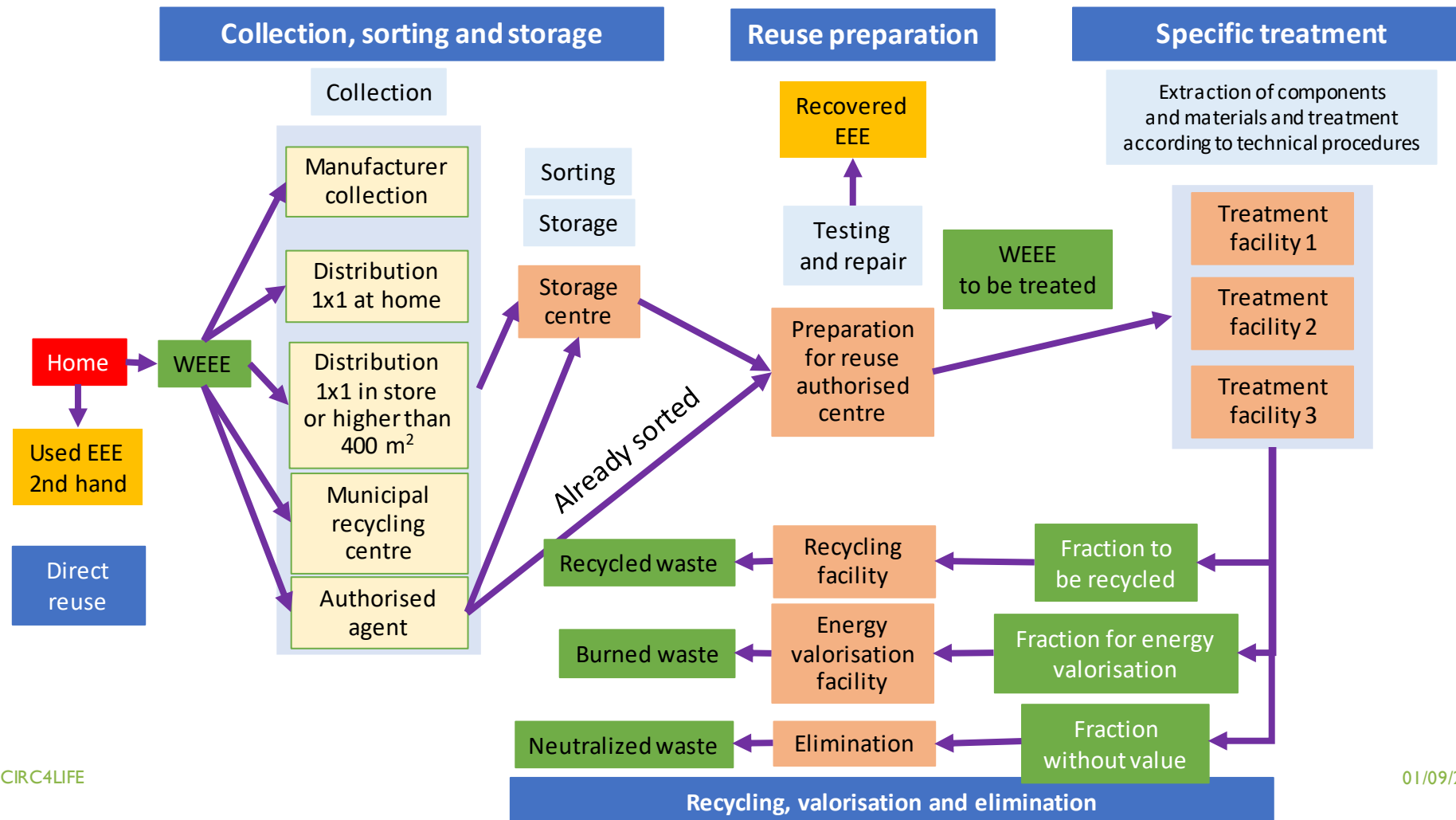
WEEES



- A WEEE is the acronym for Waste of Electrical and Electronic Equipment. Some examples are computers, tablets, smartphones, fridges, etc. All of them are considered under WEEE Directive 2012/19/EU.
- The main issue of a WEEE is that it is a complex mixture of materials and components. Some of them are hazardous (for environment and health) when they are not managed correctly. Others are rare elements and large amount of resources are needed for their manufacturing.
- In the framework of EU, it is easy to check what is a WEEE because manufacturers must mark them with this label



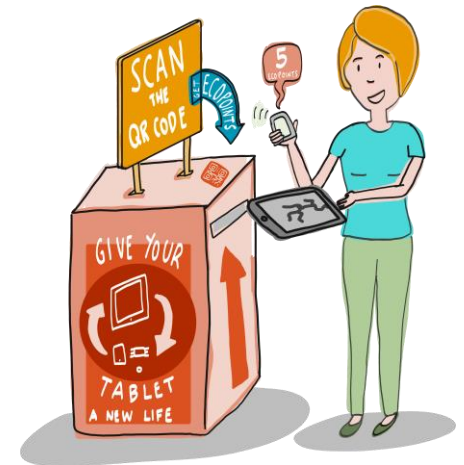
WEEES



DEMONSTRATION OF REUSE AND RECYCLING OF WEEE



- Use of intelligent bins in several places including schools, to increase the collection of small electronic devices for reuse or recycling
- Development of a business model on the recycling and reuse of tablets by incentivising end-users, raising awareness and getting consumer's preferences on reused / refurbished WEEE
- Awareness campaign for example in schools on the circular economy and the potential role they can have in it





WEES: REUSE OF TABLETS

- What is the value?

Enlarge the tablet's lifecycle by selling at low price, borrowing or leasing 2nd hand recovered tablets once previous users disposed them in specific bins (sorted)

- Why is Circular?

Avoiding purchase new tablets when it is not required → creation of new “green” business models

- Who is the customer?

Citizens from 18 to 65, supermarkets or municipalities, incentivizers and companies looking for tablets to be sold

Why should they want the product?

- Emotional benefit: green attitude
- Economic: Incentives, higher amount of clients and tablets at low cost

COST STRUCTURE

- **Bins**: buying + maintenance (business owner)
- **Incentives**: marketing cost to gather local commerce
- **Media, advertising and legal costs**
- **APP**: Development and maintenance + servers
- **Formation + transportation + facilities**

REVENUE LOGIC

- **For recycler** → Selling repaired or used tablets
- **For business owner** → selling goods to repairing companies + bins renting
- **For authorised agent** → Fees from manufacturing companies
- **For local commerce** → New (crossed) purchases by means of incentives + increasing visibility
- **For municipality** → Avoiding future fines + increasing social awareness
- **For maintainers** → Reparation works contract
- **For bins manufacturer** → Selling bins
- **For consumers** → Small incentive + feeling better + lower prices for buyers

WEEES: RECYCLE



VALUE PROPOSITION

- What is the value?

Reducing the extraction of new Raw materials by using recycled materials and/or components from tablets once previous users disposed them in specific bins (sorted)

- Why is Circular?

Avoiding extracting raw (regular and rare) materials

Who is the customer?

Recycling facilities

- Why should they want the product?

It's their raw material

COST STRUCTURE

- **Bins:** buying + maintenance (business owner)
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REVENUE LOGIC

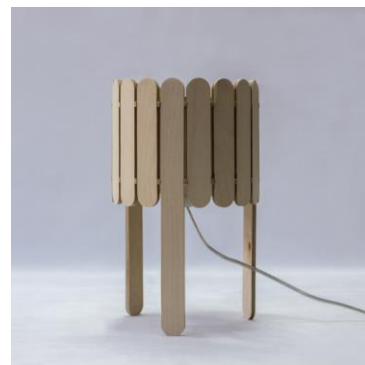
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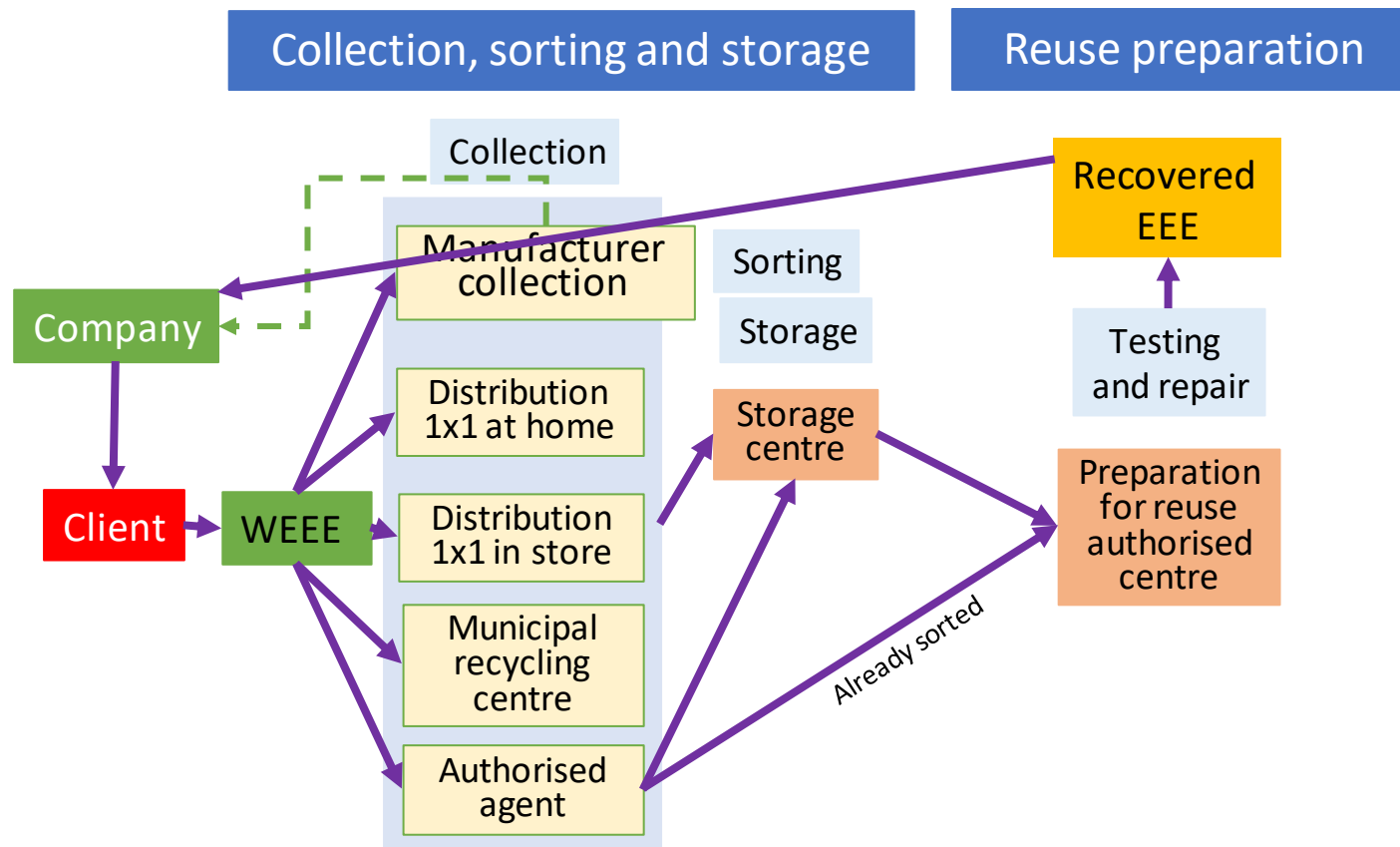
DEMONSTRATION OF DOMESTIC LED LIGHT

- Development of a modular lamp with industrial scrap material based on the consumer feedback (reviews, workshops, surveys)
- Information about the environmental impact, through LCA of lamps in the online shop, in the form of eco-cost and eco-credits
- Take-back scheme, discount on new purchase based on eco-credits for the lamp
- System for remanufacturing of returned lamps

ona®



DOMESTIC LIGHTING



DOMESTIC LIGHTING



VALUE PROPOSITION

- What is the value?

Develop a kind-of-renew plan where the client obtain a refund (based on eco-credits model) when they bring back the lamps to the company (ONA) and purchase a new one. Additionally, the lamp owner can repair it directly by the manufacturer for a small fee

- Why is Circular?

Avoiding purchase new lamps that can be reused/recycled.

Who is the customer?

Offices. leisure premises, hotels, public places, domestic

Why should they want the product?

- Emotional benefit: green attitude
- Economic: Refund/kind-of-renew plan

COST STRUCTURE

- **Incentives**: Local commerce + ONA's incentives
- **Media and advertising**: ONA
- **APP**: Development (C4L) and ONA's website
- **Formation + transportation + facilities**: ONA

REVENUE LOGIC

- **For Recycling company** → raw material to be sold to ONA
- **For ONA** → Fidelity program + Raw material reduction + re-selling
- **For consumers** → Small incentive + feeling better + lower prices for buyers.

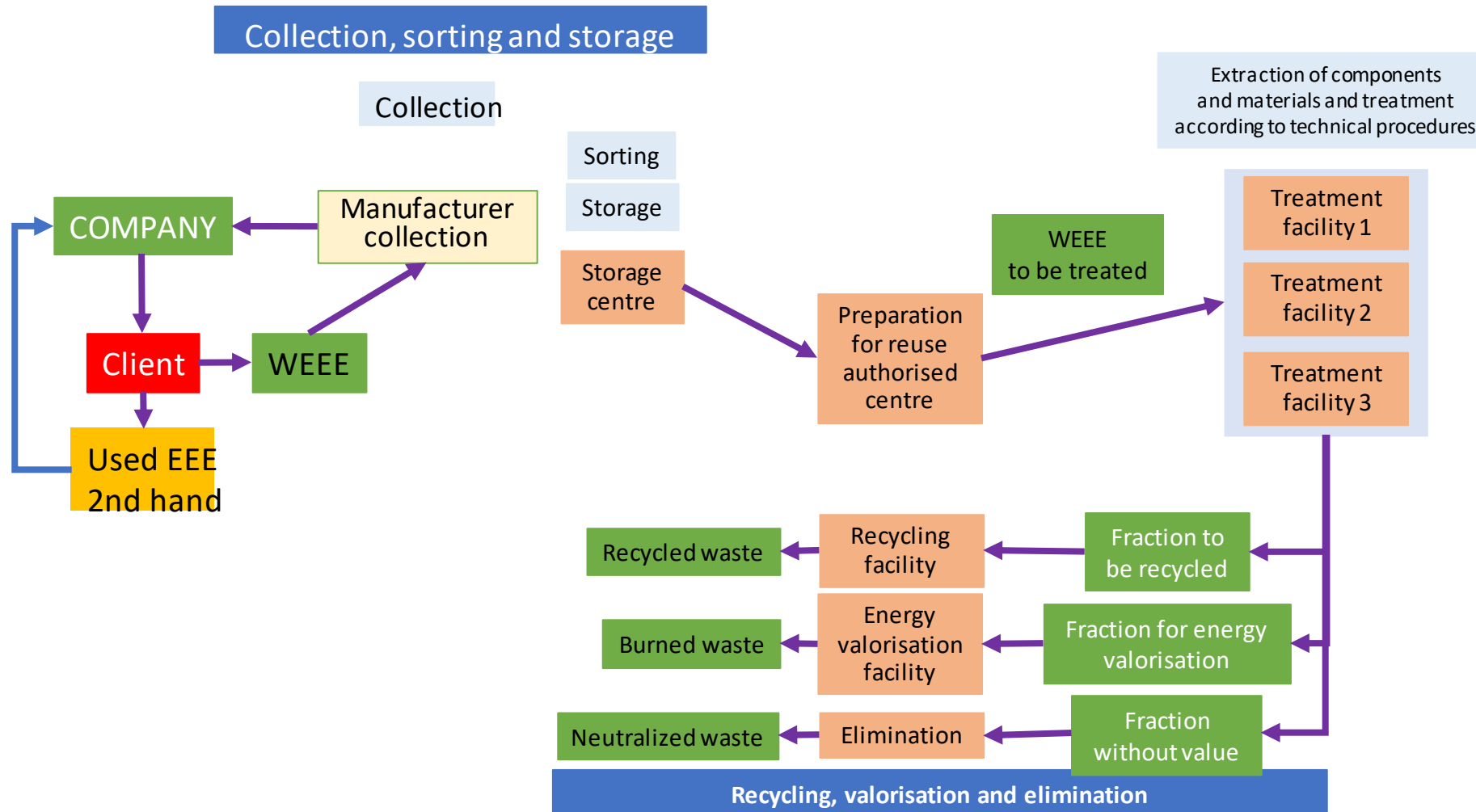
DEMONSTRATION OF INDUSTRIAL LED LIGHT



- Development of a new modular LED industrial lamp based on feedback from workshops, and surveys
- The modular luminaire has significantly reduced environmental impact, based on life-cycle-assessment
- Co-creation of a leasing service, via survey and workshops with companies



INDUSTRIAL LEASING OF LIGHTS



INDUSTRIAL LEASING OF LIGHTS



VALUE PROPOSITION

- What is the value?

Provide a Light-as-service offer to industrial/business/municipalities users.

- Why is Circular?

Avoiding purchase new LED lamps that can be reused/recycled + traceability

- Who is the customer?

- Business users
- Municipalities

Why should they want the product?

Saving money + social conscience + outsourcing

COST STRUCTURE

- Insurance payment
- Management of franchises
- Storage facilities (High stock)
- Manufacturing and maintenance facilities
- Manufacturing, management and maintenance personnel
- Marketing activities
- WEEE management

REVENUE LOGIC

- **For leasing company (KOSNIC)** → Monthly tariff
- **For Insurance companies** → Annual tariff
- **For contractors and wholesalers** → installation and commissions

THANKS





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