



# CIRCULAR PROCUREMENT OPPORTUNITIES

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## What is Circular Procurement?

Circular procurement sets out an approach to green public procurement which pays special attention to "the purchase of works, goods or services that seek to contribute to the **closed energy and material loops** within supply chains, whilst minimising, and in the best case avoiding, negative environmental impacts and waste creation across the **whole life-cycle**".

**Carbon footprint** is a widely used measure of the amount of greenhouse gases, such as carbon dioxide, released into the atmosphere as a direct and indirect result of human activities.



Embodied  
Carbon



## Procurement's role - Circular Procurement Strategies



obtaining raw  
materials



manufacturing  
and logistics

### Life Cycle Impact



use of products  
or works and the  
delivery of  
services



re-use/re-  
manufacture and  
final disposal

Prevention

Preparing for re-use

Recycling

Other  
recovery

Disposal



# Circular Strategies



- Circular design
  - Design to disassembly
  - Repairability
- Optimise lifetime and use
  - Re-use
  - Repair
  - Sharing Economy
- Extend lifetime
  - Remanufacture
  - Modularise
  - Take-back
- Product as a service or Leasing
- Resource recovery





## How to embed Circular Procurement?

- Embedding circular procurement in policies
- Early stakeholder engagement
- Identify hot spots, opportunities and gaps in the market
- Communicate your sustainability objectives

# Embedding in the Tender Process



Rethink the need – do we need to own it, does it need to be brand new, latest spec, owned assets + local repair and service options



SoR – Allow for innovation but require minimum circular capabilities



Early market engagement - Can suppliers offer circular solutions?



Move your procurement standard to circular

# Benefits of circular procurement

## Economic:

- Whole life value
- Cost control and savings
- Planning and forecasting
- Resilient and local supply chains
- Partnerships with suppliers

## Environmental

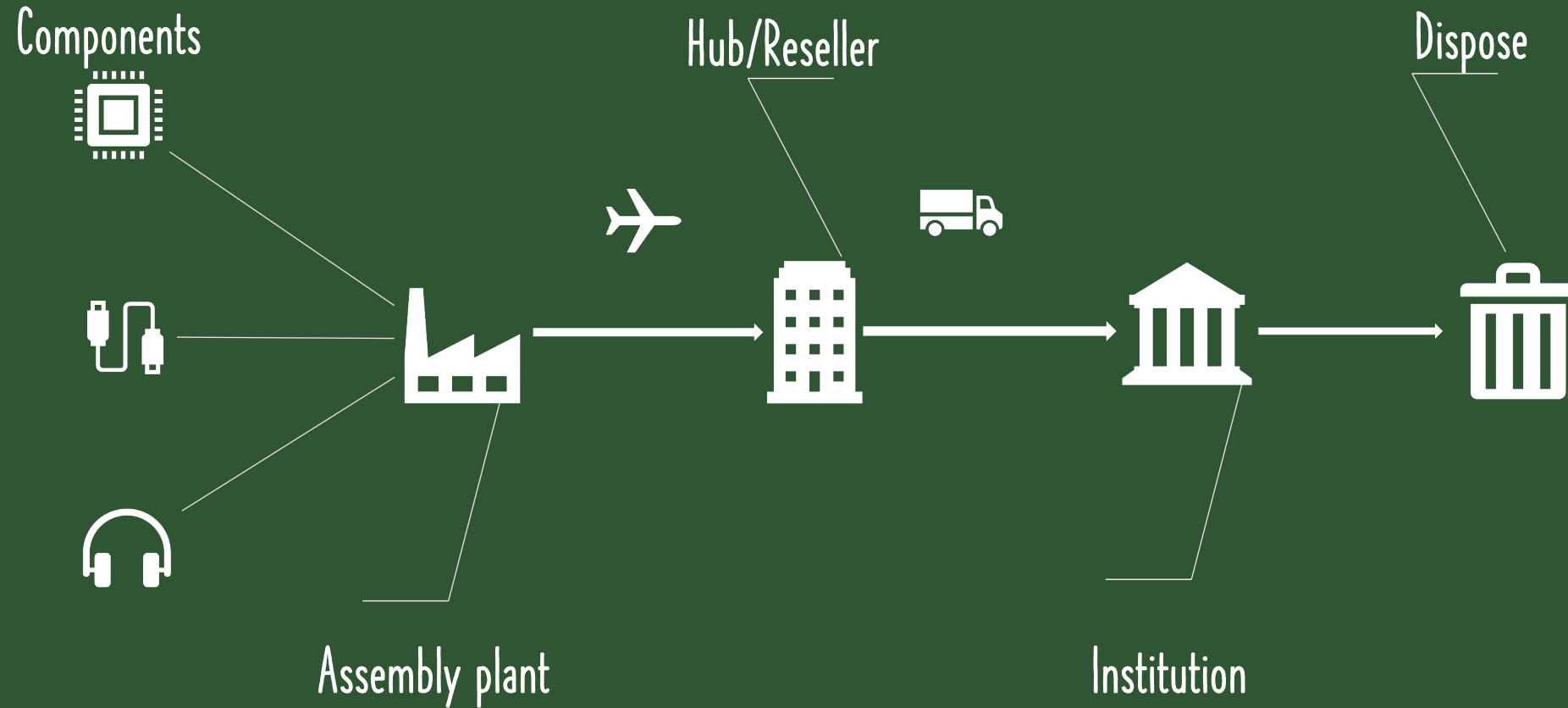
- Circulation of materials reducing consumption of materials
- Reduction of waste
- Addressing issues such as deforestation, GHG emissions, water use

## Social:

- Local supply markets
- Inclusive skills and training opportunities
- Third sector and supported businesses



# The IT Supply Chain - Linear





### Social impact

*Consequences for the local population*

- Loss of access to land, water, food and income for local communities
- Conflicts within communities and corruption
- Criminalisation of social leaders and demonstrations
- Human rights violations and (forced) migration



### Impact on climate & environment

- Biodiversity loss and destruction of vulnerable ecosystems
- Excessive water use, causing soils and rivers to dry out
- Pollution of water, soil and air with toxic substances and heavy metals
- Large CO<sub>2</sub> emissions



### Impact on climate & environment

- Major environmental impact through the design of products that are difficult to repair or recycle and the use of low-quality materials

## MINING

## SMELTERS

## DESIGN

« lack of transparency »

# IMPACTS OF THE ICT SUPPLY CHAIN

## END OF LIFE

## E-WASTE

## USE

## PRODUCTION



### Social impact

*Poor working conditions*

- Illegal workplaces and dangerous working conditions
- Exposure to toxic substances



### Impact on climate & environment

- Air, soil and water pollution caused by uncontrolled processing
- CO<sub>2</sub> emissions (limited)



### Social impact

*Poor working conditions*

- Low wages, long working hours and temporary contracts
- Forced labour and no freedom of association
- Violations of health and safety measures in the workplace
- Exposure of workers to toxic substances



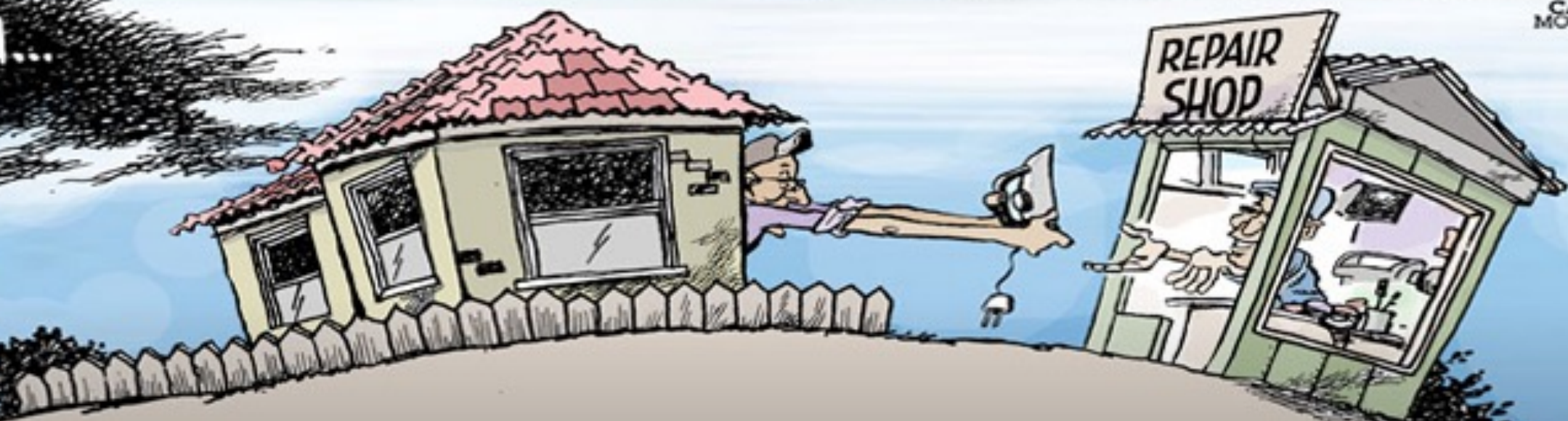
### Impact on climate & environment

- Pollution of air, soil and water caused by the use of chemicals
- Large CO<sub>2</sub> emissions



THEN...

CARTOON  
MOVEMENT

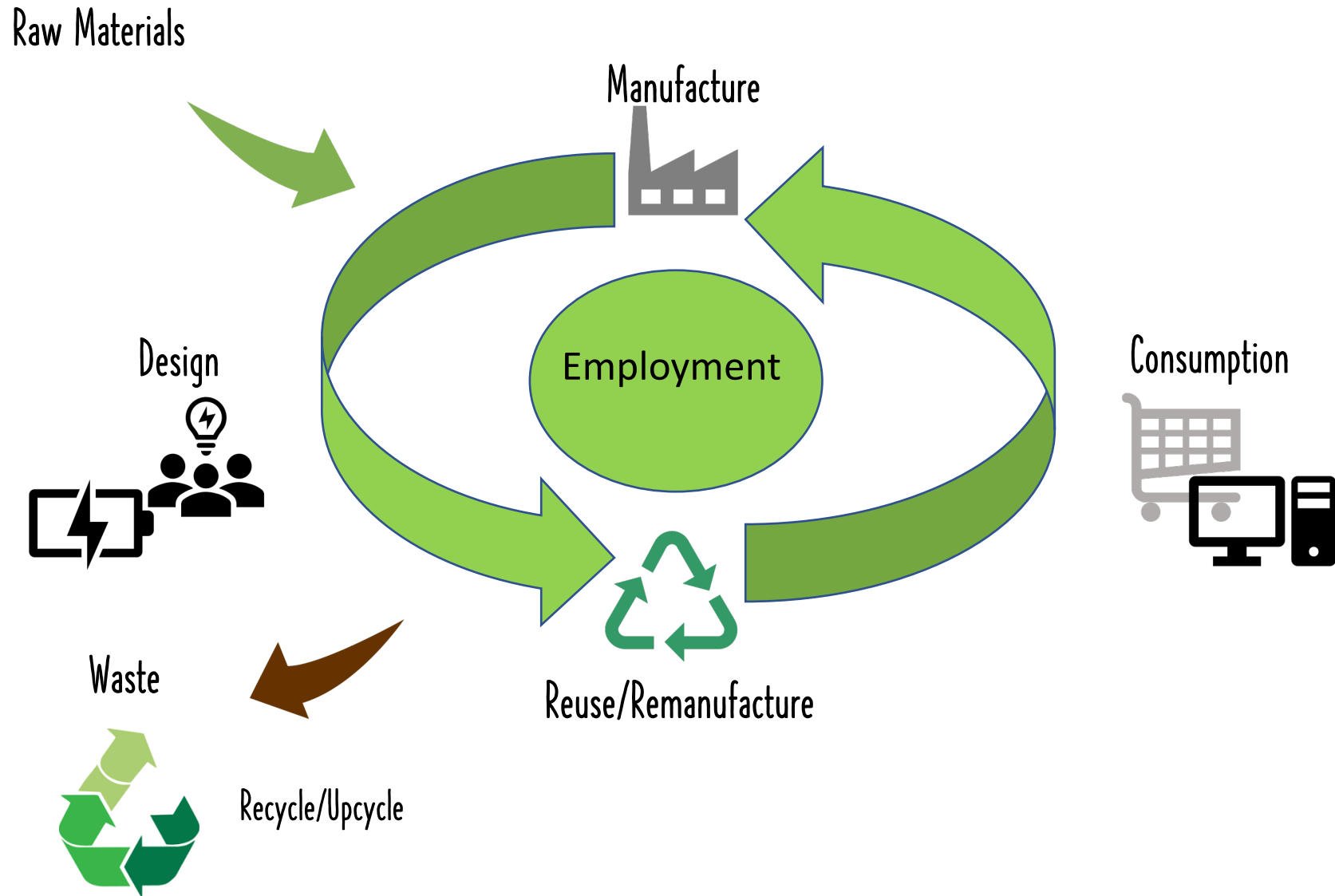


NOW...





# Transition to Circular Economy



# IT Recycling Framework Agreements



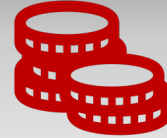
Collection and treatment of IT hardware and electronics classed as redundant or waste



Processing of hardware Removal of personal data and removal/ destruction of hard drives



Innovative approaches including refurbishment and repair or more efficient recovery process



Ability to obtain rebates for any products sold on for further use by the contractor



Creation of social benefits and / or circular economy approach

# What is revolvit?



We are a shared services (not for profit) company



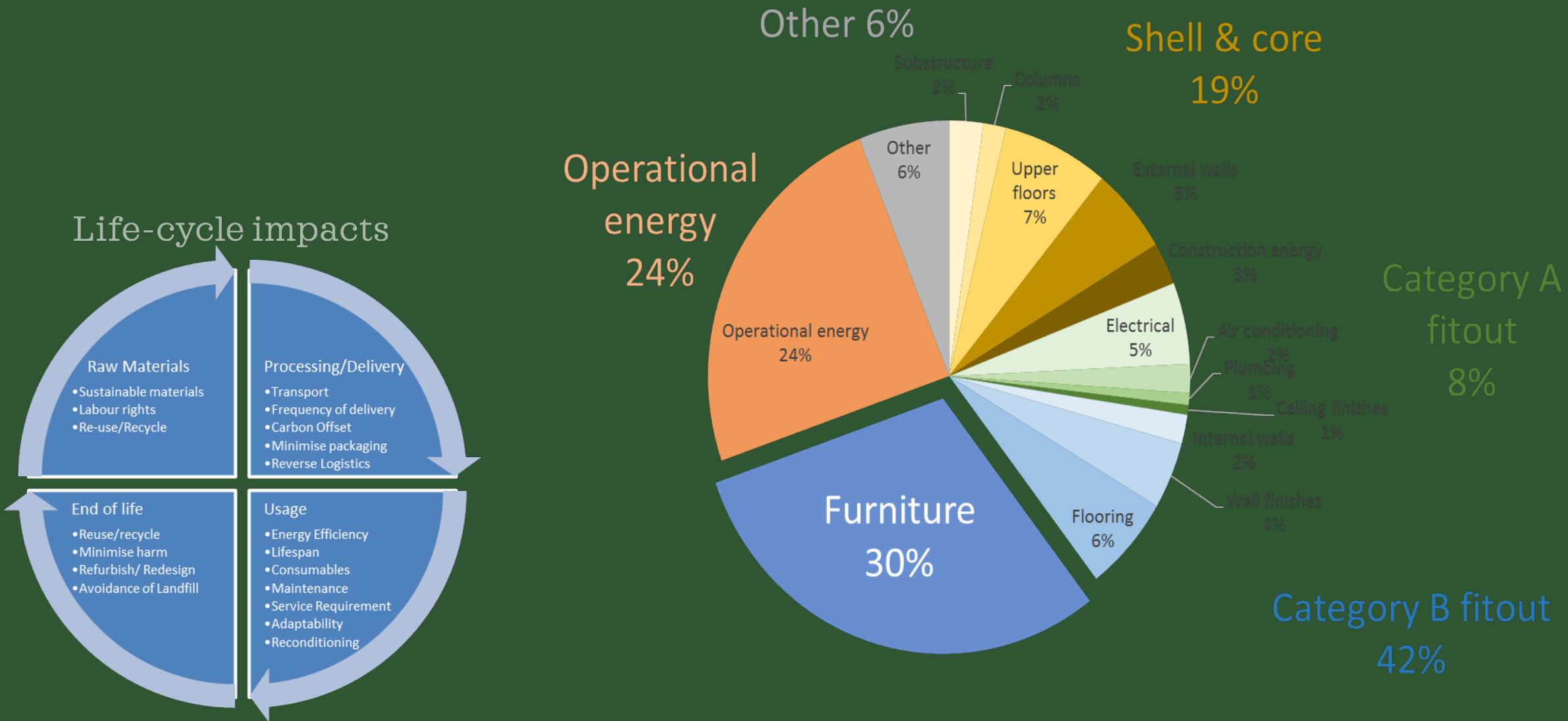
Our purpose is to work with our members to offer shared services that reduce our members carbon consumption



We will work with our members to identify the actual benefits achieved from our services be they environmental, economic or social



# GREENHOUSE GAS EMISSIONS OVER THE LIFETIME OF A COMMERCIAL BUILDING



Source: Treloar, G.I. Et al, 1999, *Embodied energy analysis of fixtures, fittings and furniture in office buildings*, Facilities, Volume 17, Number 11, pp. 403-409 (Accessed on 14 June 2019 at [https://www.academia.edu/18481731/Embodied\\_energy\\_analysis\\_of\\_fixtures\\_fittings\\_and\\_furniture\\_in\\_office\\_buildings](https://www.academia.edu/18481731/Embodied_energy_analysis_of_fixtures_fittings_and_furniture_in_office_buildings))

# REUSING AND REFURBISHING FURNITURE IN A NEW OFFICE

Public Health Wales (PHW) National Health Service (NHS) Trust, Wales

- Relocation to new 4,700m<sup>2</sup> open plan office in Cardiff bay in 2016
- **Procurement objectives:**
  - reuse as much of the existing items as possible. This included repairing and refurbishing existing items where necessary and adding new elements as required by the design
  - Encourage participation by social enterprises
  - outcomes-based approach
- **Design Specifications:**
  - meet collaborative workspace requirements.
  - Re-use as much of the existing furniture as possible and augment this with pre-owned items, with new furniture being the least favoured option.
- **Outcome**
  - Out of the 2,563 items used in the new office:
    - • 45% of items were re-used
    - • 49% of items were remanufactured
    - • Only 6% of items were sourced from new stock
  - In total, around 41 tonnes of waste were diverted from landfill, and the project
    - saved around 134 tonnes of CO<sub>2</sub>e (carbon dioxide equivalents) based on the:
      - • Re-use of 729 office/meeting room desks (saving 50.04 tonnes of CO<sub>2</sub>e)
      - • Re-use of 979 office/meeting room chairs (saving 57.70 tonnes of CO<sub>2</sub>e)
      - • Re-use of 522 office pedestals (saving 20.67 tonnes of CO<sub>2</sub>e)
      - • 670sqm of re-used carpet tiles (saving 5.7 tonnes of CO<sub>2</sub>e)



## Case Study

[https://ec.europa.eu/environment/gpp/pdf/news\\_alert/Issue77\\_Case\\_Study\\_152\\_Wales.pdf](https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue77_Case_Study_152_Wales.pdf)

# YOU DON'T ALWAYS HAVE TO THINK **BIG**

## FFE1011 AP – SUPPLY, DELIVERY & INSTALLATION OF FURNITURE

### Recycle

#### Abertay University

- furniture gathered over 15 years recycled within the supply chain.
- **6,795 kg** of furniture was diverted from landfill
- **7,150 kg/CO2e** saved

#### University of Edinburgh

- 275 student task chairs
- **> 11,000 kg/CO2e** saved

#### Edinburgh College

- 587 chairs & 178 Desks
- **>30,000 Kg / Co2e** saved

### Re-use

Donation of exam furniture used for Covid testing and vaccination centres

**> 26,000 kg/CO2e** saved

### Refurbish

#### Edinburgh College

250 chairs refurbished. Saved £20K and **10,000 Kg/ Co2e**

#### University of Strathclyde

240 chairs refurbished. Saved £10K and **9,000 Kg of Co2e**

#### University of Glasgow

60 conference chairs refurbished. Saved £4K and **2,400 Kg of Co2e**

### It's not added on, it's built in

- Level of recycled components stated for each core product item
- Contractors are encouraged to implement circular economy principles throughout the delivery of the Framework Agreement
- Contractors are challenged to reuse and recycle redundant furniture –take-back schemes and recycling services available for all lots
- Refurbishment/Re-modelling and Remanufacturing services available for all lots



# The next step....

## Sustainable Furniture Framework FFE2008 NE

- Framework commenced 14<sup>th</sup> Feb 2022 and runs for two years with option to extend
- Three main lots:
  - Lot 1 - Circular Economy Considerations
  - Lot 2 - Supply and Installation
  - Lot 3 - Specialist
- Circular Economy Considerations sub lots
  - 1a Circular Economy Considerations - Refurbishment and Repair  
8 regional lots, offering : take-back, refurbish, refinish, reupholster, repair, reuse, repurpose, recycle.
  - 1b Circular Economy Considerations - Sustainable Furniture Design for Projects  
Provide interior design and furniture layout service Supply furniture (prioritise customer's existing stock plus that is available for refurbishment, reuse, repair, repurposing, reinstalling; then supply from someone else's surplus products; only then supply virgin product). take-back surplus product for repair, reuse, repurpose or recycle. Install furniture to project.
  - 1c Circular Economy Considerations - e-Marketplace  
Dedicated consortia e-Marketplace for refurbished furniture which includes distribution logistics utilizing the contractor's own e-Marketplace solution
  - 1d Circular Economy Considerations - Furniture as a Service (FaaS)  
Short- and long-term leasing



<b>1a Circular Economy Considerations - Refurbishment and Repair</b>  1      Workscape Ltd 2      Crown Workspace 3      Right Green Recycle 4      Rype Office Ltd / John Pulsford Associates Limited*  * Appointment varies by lot	<b>1b Circular Economy Considerations - Sustainable Furniture Design for Projects</b>  1      Workscape Ltd 2      Rype Office Ltd 3      Crown Workspace 4      Right Green Recycle 5      Over2Hills
<b>1c Circular Economy Considerations - e-Marketplace</b>  1      Workscape Ltd 2      Crown Workspace	<b>1d Circular Economy Considerations - Furniture as a Service (FaaS)</b>  1      Workscape Ltd 2      Crown Workspace 3      Right Green Recycle 4      Over2Hills

# FFE1008 AP – SUPPLY, DELIVERY AND FITTING OF FLOOR COVERINGS

Circular economy options include

- Level of recycled components against each product of the price list – product information includes details of the materials used, the level of recycled content/materials used in product, the level of product that is recyclable, as well as the estimated lifespan of the flooring product.
- Take-back policy for redundant carpets, options include:
  - Repurposing – Cleaning and reuse of used carpets
  - Donations to Charities & the social sector
  - Recycling into new floorcovering products, plastic composite products & construction materials
  - Energy & Material recovery through certified cement industry and refuse derived fuel reprocessing centres
- Regional lots for refurbishment and repair services



# EFM1027 AP - WASTE MANAGEMENT SERVICES





# EFM1027 AP - WASTE MANAGEMENT SERVICES

## Waste Stream Schedule A - General Waste, Recyclates & Recoverables

Builders' rubble collected from Inverness College is taken to the local quarry where it is processed into reusable aggregate products that are used on local construction projects.

Any reusable furniture collected from the institutions goes to local charities including New Start.

Collected from Inverness College & School of Forestry is processed locally into Biomass pellets to be burned in biomass boilers across the North of Scotland creating heat and electricity.

Food Waste turned into premium compost for agriculture

Northern Recycling Solutions Ltd



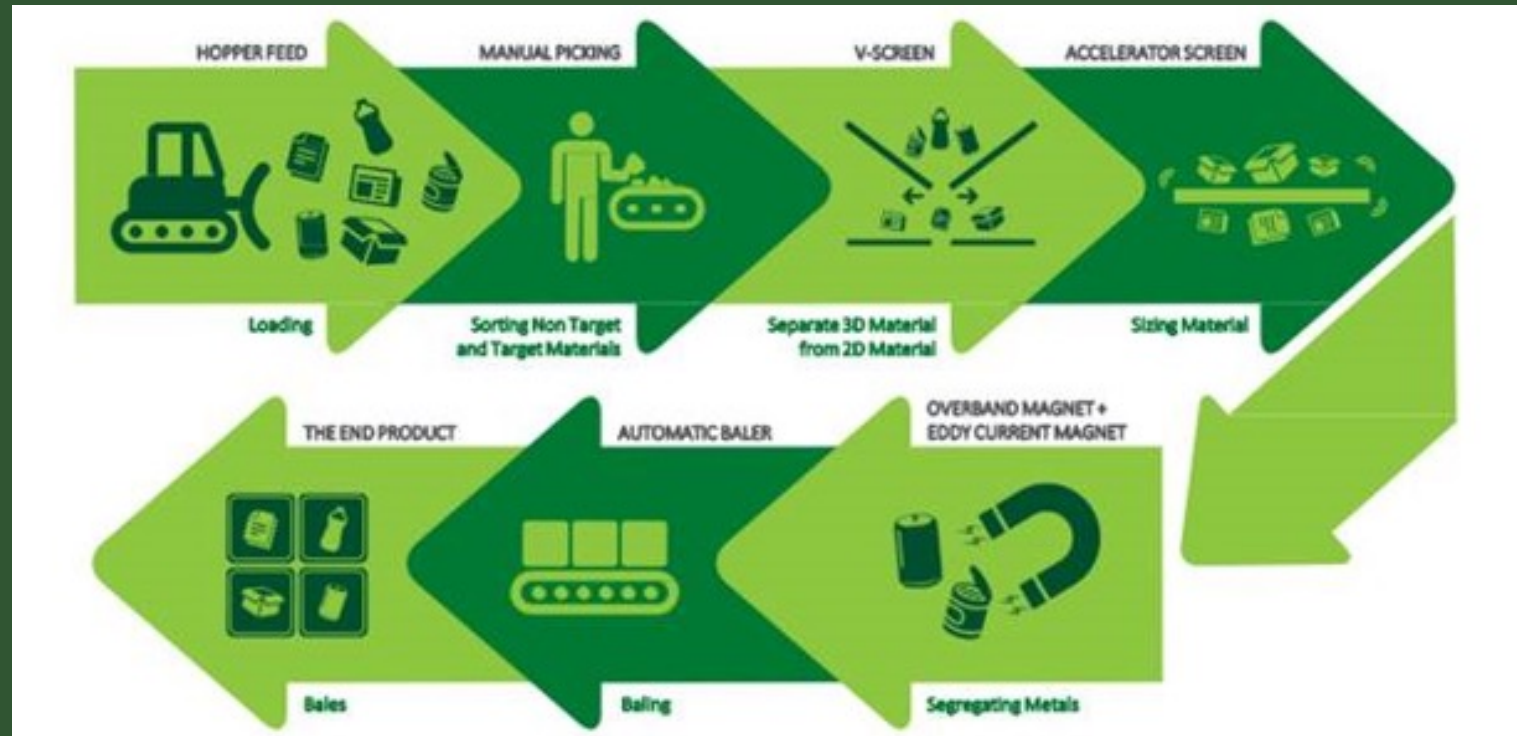


# EFM1027 AP - WASTE MANAGEMENT SERVICES

Enva

Dry Mixed Recycling MRF (Material Recycling Facility)

Like general waste, all mixed recycling waste goes through a picking process.



# EFM1027 AP - WASTE MANAGEMENT SERVICES

## Schedule B - WEEE & Associated Materials

Recover components from batteries including cobalt, nickel, and copper

Eco-Friendly, Decorative Glass aggregate from old television screens

Decorative Silica Stone Tiles







# - WASTE MANAGEMENT SERVICES

Waste Stream Schedule E - Confidential Waste

Paper, Cardboard, Plastics and Cans are closed loop recycled into new products.





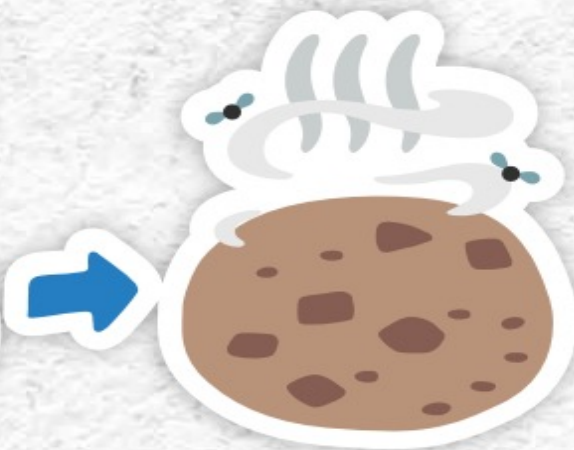
# EFM1027 AP - WASTE MANAGEMENT SERVICES

Schedule F - Innovative Food Waste

## Your food waste - From plate to plug socket!



**Your recycled  
food waste  
collected**



**Waste prepared  
& placed in  
digestion tanks**



**Resulting digestate  
then pasteurised  
& separated**



**Power injected into  
grid & biofertiliser  
spread on fields**

# EFM1027 AP - WASTE MANAGEMENT SERVICES

Waste Stream G - Innovative Redundant IT &  
Electronic Solutions



Rebates



Pop up Shop on Campus



Reuse / Recycling / Repurposing





# ENDLESS OPPORTUNITIES

## EFM1031 AP - Trade Materials (SXL 0717 )

- The Framework offers the ability to buy recycled paint and to recycle paint and paint cans.
- Paint disposal schemes available for most Contractor



## JAN1012 AP - PPE, Work & Sportswear

- Reusable and machine washable masks
- Level of recycled components stated for each core product item
- Items marked as recyclable
- Contractors are encouraged to implement circular economy principles throughout the delivery of the Framework Agreement
- Contractors offer a take back and recycling service
  - Donate returned jackets clothing, and boots / shoes to homeless shelters and / or local clothing charitable organisations.
  - Donate returned / out of date Hard Hats to local charities to turn into hanging baskets.

## EFM1042 AP - Road Surfacing Services

- Ability to specify use of recycled products
- Dundee & Angus College
  - Carpark and main entrance route
  - MacRebur product using hard to recycle plastics
  - Offers 30 year guarantee
  - Saved approx. 1,600 Kg / CO2e compared to traditional asphalt material



## JAN1007 AP - Cleaning materials & Chemicals

- Take back collection and re-use service for 5 litre and larger containers - closed loop recycling

## EFM1036 AP - Sustainable Timber

- Take back service for re-use and recycling of redundant timber products and end cuts

# Q & A SESSION