



# CIRCULAR ECONOMY PROGRAMME

Annual Report  
for 2022

The Driving Force for Ireland's  
Move to a Circular Economy



Rialtas na hÉireann  
Government of Ireland

# FOREWORD

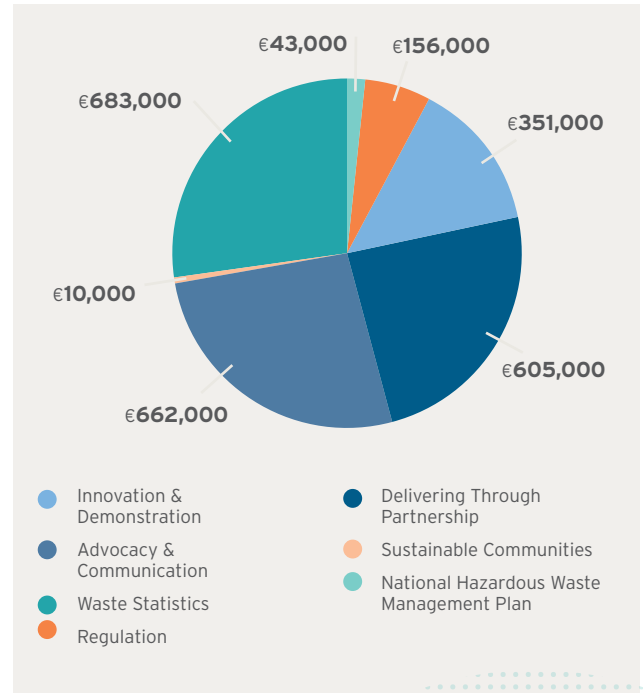
**In 2022, the Circular Economy Act came into force putting the Environmental Protection Agency-led Circular Economy Programme on a statutory footing.**

The programme delivered activities related to implementing, regulating and measuring the circular economy and waste. Collaboration with Government, local government, industry, business and social enterprises is key to continued success in driving the transition to a circular economy.

This report sets out our key activities and highlights for 2022.

**Warren Phelan**  
 Programme Manager  
 Circular Economy Programme

## CIRCULAR ECONOMY PROGRAMME EXPENDITURE 2022





# EPA CIRCULAR ECONOMY CONFERENCE

The annual Circular Economy Programme conference was held as a hybrid event on 22<sup>nd</sup> September.

## SESSIONS

Setting the Scene

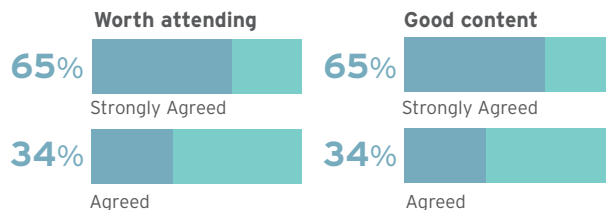
Measurement Matters

Regulation for Circularity

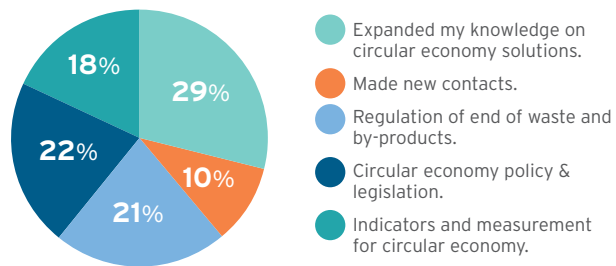
Circular Solutions



## FEEDBACK



## What were your learnings from this event?



SEE AGENDA  
HERE



WATCH  
CONFERENCE  
RECORDINGS  
HERE

## VIEW THE CONFERENCE PRESENTATIONS



Setting  
Scene



Measurement  
Matters



Regulation for  
Circularity



Circular  
Solutions

Forward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More



# BEHAVIOURAL INSIGHTS

Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More

The Circular Economy Programme's behavioural insights work is informing policy and supporting evidence-based national communication campaigns. In 2022, the findings of nationally representative surveys on plastics and food were published.



## Plastics: Attitudes and behaviours in Ireland 2019 - 2021

**Key finding:** while there is a high level of confidence in knowing what plastic waste goes into each bin; when tested it was found that there was some confusion about how to correctly segregate certain plastic wastes.

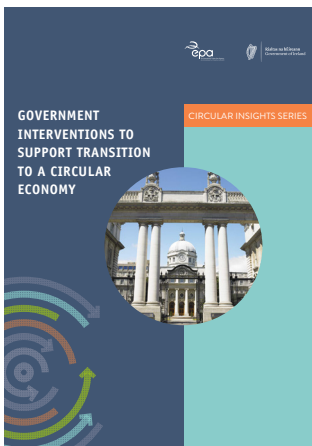
## Food Waste: Attitudes and behaviours in Ireland 2021

**Key finding:** lack of planning is the main reason food waste is generated at home - this finding informed Stop Food Waste's 2022 communications campaign.



# CIRCULAR INSIGHTS SERIES

The Circular Insights Series focusses on emerging and priority topics to build evidence and fill knowledge gaps to support circular economy policy.



## Government interventions to support transition to a circular economy

Barriers and opportunities for targeted government interventions to support transition to a circular economy are identified in this Circular Insights Series study.

“ Retaining the value of materials for as long as possible is a key component of any circular economy. ”



SEE  
DOCUMENT  
HERE



## Role of Ireland's digital sector in accelerating the transition to a circular economy

The opportunities to accelerate a digitally-enabled circular economy in Ireland are set out in this Circular Insights Series study.

“

Digital solutions must be developed in line with circular principles to avoid adverse environmental impacts

”



SEE  
DOCUMENT  
HERE

Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More

# FOOD WASTE PREVENTION



Advocacy, Insights,  
Data & Coordination

Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More



## STOPFoodWaste.ie

**In 2022 the theme for all Stop Food Waste communications was to encourage simple, good behaviours around food and meal planning, activities informed by behavioural insights research.**

National Stop Food Waste Day was on 1<sup>st</sup> March and the focus was on 'Make use-by dates work for you'.

#StopFoodWasteDay trended on Twitter with high profile engagement including An Taoiseach, Micheál Martin and the Minister for Agriculture, Food and the Marine, Charlie McConalogue.

A national communications campaign #PlanToSave ran from 14<sup>th</sup>-27<sup>th</sup> November and had a reach of 1.3 million.

## 1<sup>st</sup> MARCH IS NATIONAL STOP FOOD WASTE DAY

The annual Festive Food Planning campaign ran in December.

STOPFOODWASTE.IE on Social media:



Facebook



Twitter



YouTube



Instagram





# FOOD WASTE PREVENTION

The national food waste prevention programme published two national methodologies to support businesses to measure food waste consistently



## EPA Food Waste Measurement Protocol

to support food and drink manufacturers



## EPA Food Service Pathway to Less Food Waste

to support hospitality businesses



“ The measuring and reporting of food waste should be viewed as an ongoing process that will improve over time as information on the different food waste and related flows improves ”

SEE NATIONAL WASTE STATISTICS HERE

“ There is compelling evidence of how much hospitality and food service businesses can improve their bottom line by minimising food waste ”

Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More



# WASTE STATISTICS DATA RELEASES

Thirteen **waste statistics releases** were published in 2022, including Municipal, Household, Food Waste, End-of-Life Vehicles, Tyres, Waste Electrical and Electronic Equipment.

**Food waste data** was reported for the first time with the data showing that 770,000 tonnes was generated in Ireland in 2020, equating to 130kg per household (and approx. €700 per household).



The National Waste Statistics Summary Report for 2020 was released in December. The report set out the actions needed to meet future statutory targets for recycling including:

- > the introduction of mandatory incentivised charging for the collection of non-household municipal waste;
- > national roll-out of brown bins; and
- > targeted enforcement campaigns to lower contamination rates in the recyclable bin.



**16m tonnes** of total national waste generated in **2020**



**CCCSE**  
Cód Cleachtais  
Chóras Staidrimh  
na hÉireann

**ISSCOP**  
Irish Statistical  
System Code of  
Practice



Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

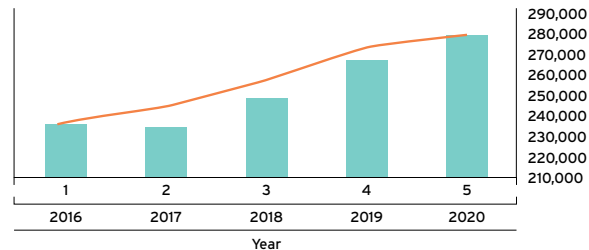
Find Out More



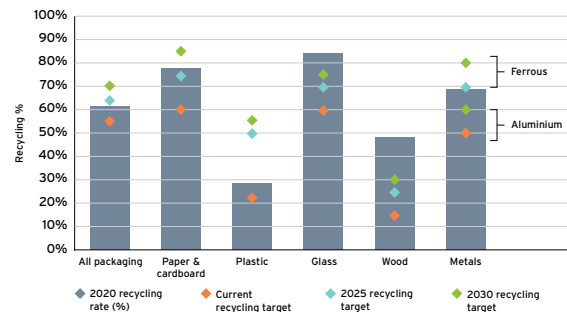


# WASTE STATISTICS TRENDS & TARGETS

- > Data published in the National Waste Statistics Summary Report for 2020 showed that municipal waste generation continued to grow steadily with 3.2 million tonnes or 640kg per person in 2020.
- > Whilst Ireland is meeting current EU recycling and recovery targets, we will struggle to meet the 2025 municipal recycling target of 55%.
- > Recycling rates for plastic packaging waste are worryingly low at 29%.
- > Future plastic packaging waste recycling rates of 50% by 2025 and 55% by 2030 will be very challenging to meet.



■ Municipal waste generated per person (kg) — Disposable income (€ million)



 [SEE NATIONAL WASTE STATISTICS SUMMARY REPORT FOR 2020 HERE](#)

## Municipal waste generation

# 3.2 million



# 640kg per person in 2020



Ireland's waste management practices, infrastructure and regulation have matured significantly over the last two decades. This change has been driven by EU legislation which in turn has shaped national policy and economic instruments



Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More

Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More



## Green Public Procurement Monitoring and Reporting by Government Departments

for reference year 2020  
was published - the first in  
an annual series.

Of the total reported  
spend of over €322  
million on contracts over  
€25,000, only 17 per cent  
(approximately €53 million)  
included green criteria.

In the EPA press  
release, this low level of  
implementation is noted as  
“a missed opportunity to  
purchase more resource-  
efficient, less polluting  
goods, services and works  
within the marketplace.”



SEE  
DOCUMENT  
HERE

## €322 million

on contracts over €25,000

only **17% (€53 million)**

included green criteria.



## To trial implementation of the Best Practice Guidelines for the preparation of Resource & Waste Management Plans for C&D Projects

a competitive funding  
call for local authorities  
issued. Three projects were  
awarded funding:

Opera Site Project -  
Limerick City & County  
Council

Abbeyfeale Traffic  
Management Project -  
Limerick City & County  
Council

Lecklevra Social Housing -  
Monaghan County Council



SEE  
DOCUMENT  
HERE

Total grant-aid:

## €71,300

“

Waste from Construction  
and Demolition (C&D)  
activity is the largest  
waste stream in Ireland  
and represents one third  
of all waste produced  
within the EU

”



# GREEN ENTERPRISE

Green Enterprise is an innovation funding call for Irish enterprises looking to demonstrate circular economy solutions.

Seven successful projects were awarded a total of

**€597k**

in grant aid funding under the **2022** call.

ORGANISATION	PROJECT AIMS
ELV Environmental Services	Investigate the key components of an electric End of Life Vehicle and the potential for their reuse and recycling in Ireland.
Reuse Island	Pilot a digital platform to deliver a reusable food and beverage container system to the Irish food service market.
Jiminy Eco Toys	Reuse, repair and refurbishment of toys.
Irish Green Building Council	Using the Limerick Opera Site development as a Lighthouse Demonstrator Project for the Circular Built Environment.
The Rediscovery Centre	Evaluating the potential of Food Rescue Cafes to contribute to reducing food waste at a national level.
FoodCloud	FoodCloud Kitchen will produce meals resulting from surplus food.
Share Club	Pilot to test system for takeaway in reusable packaging, with use in delivery services to be tested in a later step.

## 22 ACTIVE GREEN ENTERPRISE PROJECTS AT YEAR END.



### EireComposites

Developed a manufacturing process using recyclable reinforced plastic for producing wind turbine blades.



### Paltech

Designed a demonstrator recycled plastic pallet to meet industrial requirements.



### Roscommon Women's Network

The WECAN protect trained participants in designing and upcycling textiles.



Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More

# LOCAL AUTHORITY PREVENTION NETWORK

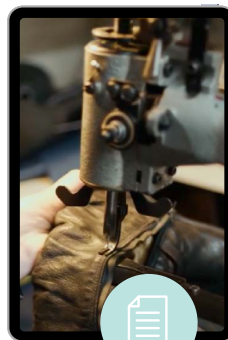
Four local authority-led grant-aided projects under the Local Authority Prevention Network concluded in 2022



## Green Workplace Waste Prevention Initiative

led by Cork County Council.

Focus of the project was opportunities to prevent food waste and single use plastic products at four local authority sites.



## Repair awareness videos

led by Laois County Council. Four promotional videos were produced focused on repair as a circular economy activity.



## Carrickmacross Toy Library

led by Monaghan County Council. This local initiative supports toy reuse.



## Designing out Waste, and Efficient Procurement in the Construction Sector

partnership project between Limerick City & County Council, Clare County Council, Mayo County Council and Dublin City Council developed and delivered a training programme for local authority staff to support circularity in construction.


# CIRCULAR ECONOMY TOOLS

- Forward
- Circular Economy Conference
- Behavioural Insights
- Circular Insights Series
- Food Waste Prevention
- Waste Statistics
- Green Enterprise
- Local Authority Prevention Network
- Circular Economy Tools
- Delivering through Partnerships
- Regulation for Circularity
- National Hazardous Waste Management Plan
- Find Out More

The Circular Economy Programme supported [Repairmystuff.ie](http://Repairmystuff.ie), Ireland's national online repair directory. In 2022, 1,213 repairers connected with 106,400 users.



Waste prevention and waste management fact sheets for public sector offices were shared across the public sector:


 [DOWNLOAD SHEETS HERE](#)

**Department of Business, Enterprise and Innovation**



**17,000**  
plastic bag liners eliminated annually by removing individual desk bins in the Carlow office.

**Department of Health**



**78,000**  
plastic bag liners eliminated annually by removing individual desk bins and




**€10,000**  
annual savings in printing costs by reducing the number of printers in use from 300 to 18.

## SOLAS learning works

SOLAS is the State Agency tasked with building Ireland's Further Education and Training sector. The Circular Economy programme is partnering with SOLAS to develop Green Skills FETAC accredited Level 4/5 training offerings in:

- > Circular Economy
- > Resource Efficiency
- > Lean for Green

These will be delivered through the Education and Training Boards network including:

 <p><b>25k</b> Further education and training courses</p>	 <p><b>339k</b> Beneficiaries</p>	 <p><b>16</b> Education and training boards</p>
--	--	--



# PARTNERSHIPS



- > The Circular Economy Programme supported **Community Resources Network Ireland**, the representative body for community based re-use, repair and recycling organisations in Ireland (47 members including 7 new in 2022).

- > EPA grant aid €90k.

**47** members **7** new in 2022  
**EPA grant aid €90k**



## Smart Farming\*

- > In partnership with the IFA, the Smart Farming programme developed updated guidance on [Water quality](#), [Soil Fertility](#), and [Feed](#) which was widely circulated on IFA and Smart Farming social media, newsletters and websites.
- > Carried out an impact assessment on the farm-level resource efficiency assessments with input from 113 farmers who had participated in the programme since 2017.
- > EPA grant aid €75k.

**113** farmers  
 who had participated in the programme since 2017  
**EPA grant aid €75k**



- > Through partnering with the **Rediscovery Centre** the following activities were supported:
- > **Circular Economy Academy**, a free mentoring & support service for social enterprises developing circular economy activities (4 regional workshops, 14 enterprises supported, 5 MoU signed).
- > **Circular Economy Conversation** on Fighting Food Waste - Have your Say! supported the public consultation on the Government's draft Food Waste Prevention Roadmap.
- > **Exhibitions** (interactive mixed media) with curated tours on Fighting Food Waste and Built Environment.
- > **Repair Series:** events during Fashion Revolution Week; bike repair demos during Bike Week, sewing repair skills workshops at university campuses.
- > EPA grant aid €150k.

## Circular Economy Academy

**4**  
 regional  
 workshops

**14**  
 enterprises  
 supported

**5**  
 MoU  
 signed

Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More



# PARTNERSHIPS

Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More



## CAMPUS LIVING LABS

A partnership with the Irish Universities Association across 8 universities to support waste prevention and recycling. (EPA grant-aid €30k)

- > **The Waste Game** a behavioural science intervention to improve waste segregation trialled in 4 universities: MU, UCD, DCU and UL.
- > 3 campuses piloted the [EPA Food Service Pathway](#) to reduce food waste: DCU, UCC, TU Dublin

For more info: [Campus Living Labs Sustainability Project | Irish Universities Association \(iua.ie\)](#)



FOR MORE INFO CLICK HERE



## CIRCULÉIRE

A partnership with Irish Manufacturing Research, DECC and EIT Climate-KIC to deliver Circuléire, the national platform for circular manufacturing. EPA grant aid €250k supported the following activities:

- > **Innovation Fund:** Four consortium projects; led by Design & Crafts Council Ireland (Circular Design), Farrell Furniture (Do More with Less), Offerre (MEDAL) and Cirtex (Upcycled Insulation).
- > **Circularity Assessments** of members (15 fully completed over lifetime of partnership, 4 underway).
- > **Thematic working groups**
- > **Innovation & Mentoring Programme** awardees: Jiminy Eco Toys, Electric Avenue (electric bikes), Refunk (furniture), ReturnR (reusable packaging), Know Carbon (circular economy enabler).

EPA grant aid **€250k**

# REGULATION FOR CIRCULARITY

Foreward

Circular Economy  
Conference

Behavioural  
Insights

Circular  
Insights Series

Food Waste  
Prevention

Waste Statistics

Green Enterprise

Local Authority  
Prevention Network

Circular  
Economy Tools

Delivering through  
Partnerships

Regulation  
for Circularity

National Hazardous  
Waste Management Plan

Find Out More

## End-of-waste (Regulation 28)

**13**  
applications  
received



**3** single-case end-of-waste  
decisions issued:  
**1** plastics  
**2** recycled aggregates



[SEE DECISIONS HERE](#)

National criteria are in development for recycled aggregates; this offers great potential to **support the development of a national market for quality recycled aggregates** and significantly reduce the inflow of work.

A decision was made to recognise a French national end-of-waste decision allowing for the transportation and use of recovered base oil in Ireland. This was the first time an end-of-waste decision from another jurisdiction was recognised for use in Ireland.

## By-products (Regulation 27)

**341**  
notifications  
received



**122** notifications closed out:  
**97** determined as by-product  
**20** determined as waste  
**5** withdrawn



[SEE BY-PRODUCT REGISTER HERE](#)

Two by-product notifications relating to industrial chemicals were successfully determined as by-product. These determinations resulted in the prevention of significant quantities of hazardous waste, contributing to key objectives of the National Hazardous Waste Management Plan.

National criteria are in development for:

- > Site-won asphalt
- > Greenfield soil and stone

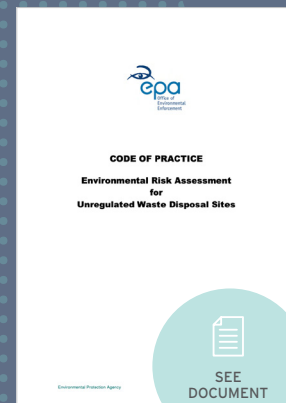
these offer great potential to **reduce the generation of these construction wastes and** significantly reduce the inflow of work.



# HISTORIC LANDFILLS



“ the principal aim in dealing with illegal waste activity should be to secure the protection of the environment and human health.



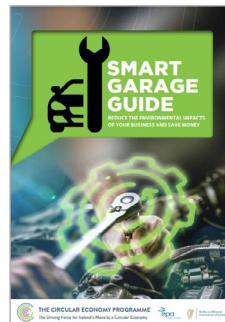
SEE DOCUMENT HERE

- Foreward
- Circular Economy Conference
- Behavioural Insights
- Circular Insights Series
- Food Waste Prevention
- Waste Statistics
- Green Enterprise
- Local Authority Prevention Network
- Circular Economy Tools
- Delivering through Partnerships
- Regulation for Circularity
- National Hazardous Waste Management Plan
- Find Out More

# NATIONAL HAZARDOUS WASTE MANAGEMENT PLAN



The Working Group for the National Hazardous Waste Management Plan 2021-2027 was convened and met twice in 2022. A number of sub-groups have been formed to progress implementation of the actions set out in the plan.



The Smart Garage Guide was published in November, to close out Key Action 14.1 of the Plan

The publication was widely disseminated through SIMI, local authorities, ELVES compliance scheme and through trade journals including AutoTrade.ie and AutoBiz.



SEE  
DOCUMENT  
HERE



The Environmental Protection Agency has prepared this National Hazardous Waste Management Plan (NWHMP) for the Republic of Ireland covering a six-year period from 2021 to 2027



SEE  
DOCUMENT  
HERE



The thing to remember is that, while there are many ways to keep the cost of your waste collection down, good waste management also benefits customer relations, creates a safer work environment and ensures you are operating within the law



Foreward

Circular Economy Conference

Behavioural Insights

Circular Insights Series

Food Waste Prevention

Waste Statistics

Green Enterprise

Local Authority Prevention Network

Circular Economy Tools

Delivering through Partnerships

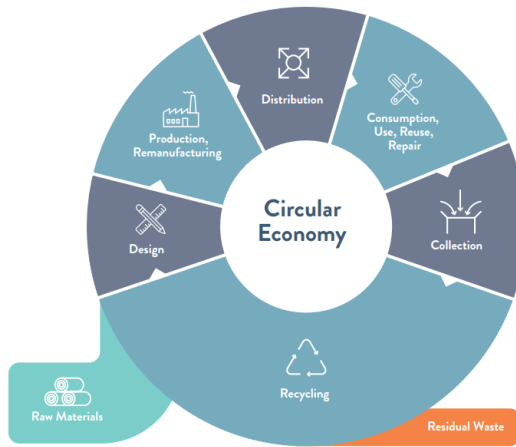
Regulation for Circularity

National Hazardous Waste Management Plan

Find Out More

# FIND OUT MORE

## CIRCULAR ECONOMY PROGRAMME 2021-2027



To find out more:

EMAIL: [CEP@EPA.IE](mailto:CEP@EPA.IE)



CHECK OUR WEBSITE: [WWW.EPA.IE](http://WWW.EPA.IE)



### PROGRAMME OVERVIEW

#### THE CIRCULAR ECONOMY PROGRAMME

Leadership   Supports   Knowledge   Opportunity

#### THE DRIVING FORCE FOR IRELAND'S MOVE TO A CIRCULAR ECONOMY:

where businesses, citizens and the public sector reduce resource use, prevent waste and achieve sustainable economic growth.



#### ADVOCACY, INSIGHTS, DATA & COORDINATION



- Policy support
- Education & Awareness
- Roadmaps & Reporting

#### INNOVATION & DEMONSTRATION



- Green Enterprise: Innovation for Circular Economy
- Green Public Procurement
- Local Authority Prevention Network

#### DELIVERING THROUGH PARTNERSHIPS



- Local Authority Sector
- Public Engagement & Social Enterprises
- Embedding circular business models
- Ireland's Reuse & Repair sector
- Sectoral Partnerships

#### REGULATORY FRAMEWORK FOR CIRCULARITY



- End-of-Waste & By-Products
- Regulation of Industry & Waste Management Activities
- Chemicals & the Non-toxic Environment

#### OUR PRIORITY AREAS



Packaging



Plastics



Textiles



Food, Water & Nutrients



Construction & Buildings



Electronics & ICT



Batteries & Vehicles