

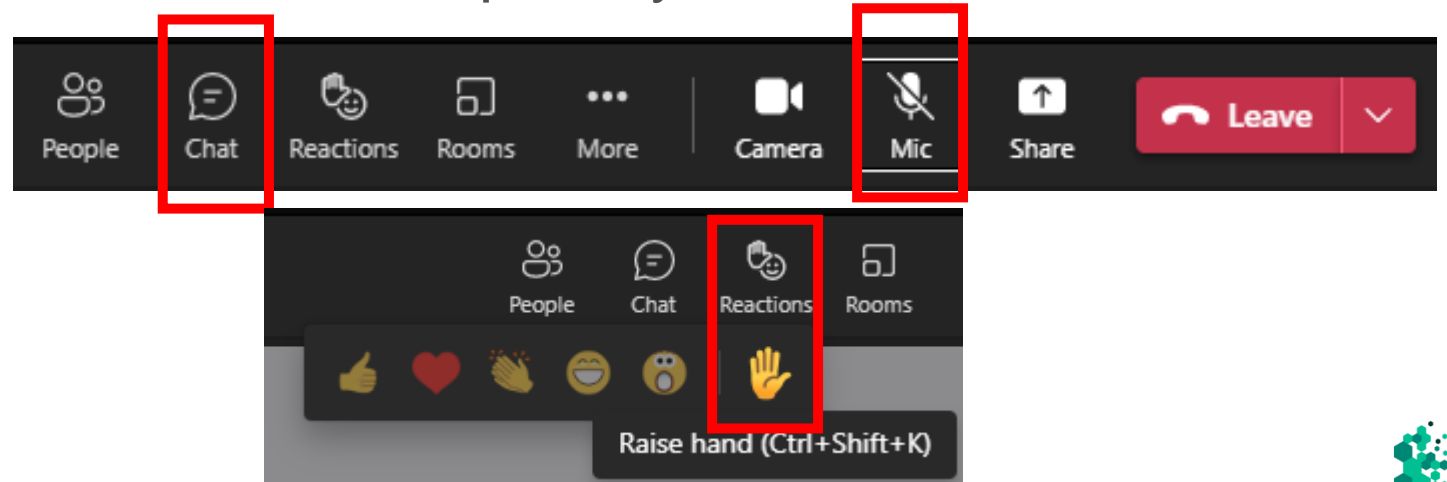
West Midlands Greener Together Forum

26th September 2023



Housekeeping

- If joining online, please stay on mute when in the main room
- Please respect all opinions and allow opportunity for all to speak when in the breakout rooms and to ask questions. We want to ensure all those joining online, and those in-person, feel part of the meeting
- To ask questions online, please write in the chat box or raise your hand to ask the question. If in person, please raise your hands
- No scheduled breaks but please feel free to step away when needed



Agenda

18:00 – 18:05pm: Welcome by Chair

18:05 – 18:15pm: **Perminder Balu** – Head of Green Cities and Circular Economy, City of Wolverhampton Council

18:15 – 18:25pm: **Oliver Thomas** – Service Manager, Green Cities and Circular Economy, City of Wolverhampton Council

18:25 – 18:35pm: **Debbie Ward** – Director of The Rebuild Site CIC and co-organiser of the Circular Economy Club Chapter

18:35 – 18:45pm: **Dr Jamie Elliot** – Delivery Manager – Business, West Midlands Combined Authority

18:45 – 19:15pm: Breakout rooms online and in-person

19:15 – 19:45pm: Plenary discussion with speakers and audience on what business support is needed on decarbonisation and adopting circular economy principles

19:45 – 20:00pm: Wrap up by chair

Greener Together Forums Purpose

Purpose

- Bring together all those across the region who are committed to cutting carbon emissions and enhancing the natural environment to discuss, collaborate and debate different initiatives.
- Space for EVERYONE to update one another about their activities to achieve net zero.
- The Forum is a space to share ideas and views that people, campaign groups, organisations and businesses **can ALL take forward and we are ALL leaving the Forum with takeaway actions.**

Advisory Board

- An Advisory Board has been created to help shape the direction and logistics of the Forum.
- We thank David Evans (Birmingham City Council), Perminder Balu (City of Wolverhampton Council, Tahir Parvaz (Canal & River Trust) and Kamran Shezad (BAHU Trust) for joining the board.
- Advisory board to help with;
 - To help bring new voices to the Forum
 - Ensure the Forum remains action focused
 - Support with improving the Forum for all
 - To **contribute to the agenda setting** for each meeting

Forum continued ...

Membership

- **Open to everyone**, with no limit to the number of members. Ensure that voices within the Forum are balanced and **everyone gets the opportunity to raise their ideas and concerns.**

Format

- Meetings held **four times a year** for 2 hours between 6-8pm
- Hybrid meeting approach with in-person and online joining options
- Meeting will move around the WMCA area
- WMCA will provide administrative support, with the **agenda open for anyone to bring relevant items to the meeting**

Roles and Responsibilities

- **All to contribute** information, specialist knowledge, expertise, ideas and learning to drive forward discussion and decision-making;
- Members are encouraged to **collaborate** rather than represent the interests of their own organisation;

Follow up information

All slides and notes from Forum meetings are shared on the [West Midlands Greener Together webpage](#) on the WMCA website.

A briefing note is developed after each meeting with answers to questions, sharing information and links requested.

This shall be shared via email after each session and will be available to download from the website.

1.0 Introduction

This note outlines discussions had at the first West Midlands Greener Together Forum on the 28th of June 2022, where the topic discussed was regional retrofit projects. The Forum brought together speakers involved in tackling retrofit from different perspectives, but all with the goal of improving energy efficiency in the region's homes. The WM2041 Five Year Plan has outlined the scale of this challenge: 292,000 homes need to be retrofitted by 2026 to stay on course for achieving net zero by 2041. The speakers were:

George Simms, SMART Hub Lead, Energy Capital – leads on establishing a cross directorate Hub to support the development of a Sustainable Market for Affordable Retrofit Technologies (SMART) across the West Midlands and delivering domestic retrofit solutions.

Phil Beardmore, Environmental Leader, Energy Confidence – Phil supports organisations and householders with energy advice and support to decarbonise businesses. Phil offers whole-house energy advise packages and supports Faith centres to decarbonise their places of worship.

Rachel Jones, Chief Executive, Act on Energy – encourage energy conservation by providing free and impartial advice for householders and small businesses across the West Midlands. They have been addressing Fuel Poverty and Climate Change for over 20 years supporting households through their energy journey.

Immy Kaur, Co-founder and Director, Civic Square - work closely with neighborhoods to experiment and test building resilient, regenerative neighbourhoods. They co-design and co-build spaces at the heart of communities for them to meet, connect and work together to address issues, such as retrofitting their homes.

The following notes reflect the discussions had within the plenary session and questions which followed each speakers' presentations. The presentations can be found on the [website here](#).

Regional retrofit projects

2.0 WMCA Energy Capital retrofit update

- The SMART Hub (Sustainable Market for Affordable Retrofit Technologies) has been set up by the WMCA in 2021, as part of its investment to deliver its net zero targets. The team has already led the region in attracting more than £10m of funding for retrofit projects and has supported partners in additional bids of more than £14m.
- The WMCA's Energy Capital team, as part of a consortium including Sandwell Council, Solihull Community Housing, City of Wolverhampton Council, Community Housing Group, Midland Heart, Orbit Housing Group, and Wrekin Housing Group, had successfully secured £7.5m from the government's Social Housing Decarbonisation Fund. This will be used to retrofit 600 social homes across the region, including the installation of low carbon heating systems and solar panels.
- The Sustainable Warmth Competition programme has also now launched in Elmdon, Solihull, and Foleshill in Coventry, following the award of £2.86m from funding secured by WMCA from central government. The WMCA, local authorities, Act on Energy and other partners have been engaging with residents in the two areas to take up the offer of support to retrofit their homes with a range of environmental solutions – from installing insulation to solar PV to low carbon heat pumps.

City of Wolverhampton Council

NET ZERO



Perminder Balu, Head of Green Cities and Circular Economy





**2028
Net Zero
Action Plan**

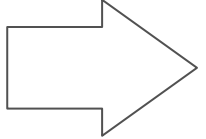
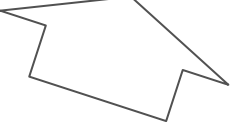
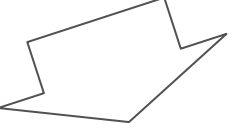
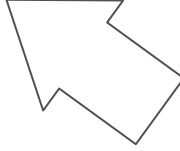
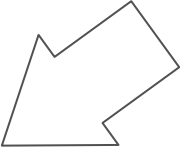
**Collaborate
Engage
Challenge**

**2041
Net Zero
Strategy**



Communities

Businesses



So what next.....how you can help?



e: ClimateAction@wolverhampton.gov.uk

Zero Waste Construction



Oliver Thomas, Service Manager Green Cities and Circular Economy

What is a Circular Economy



“The circular economy is a system where materials never become waste and nature is regenerated”. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting, and is underpinned by renewable energy. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources”

[Source: What is a circular economy? | Ellen MacArthur Foundation](#)

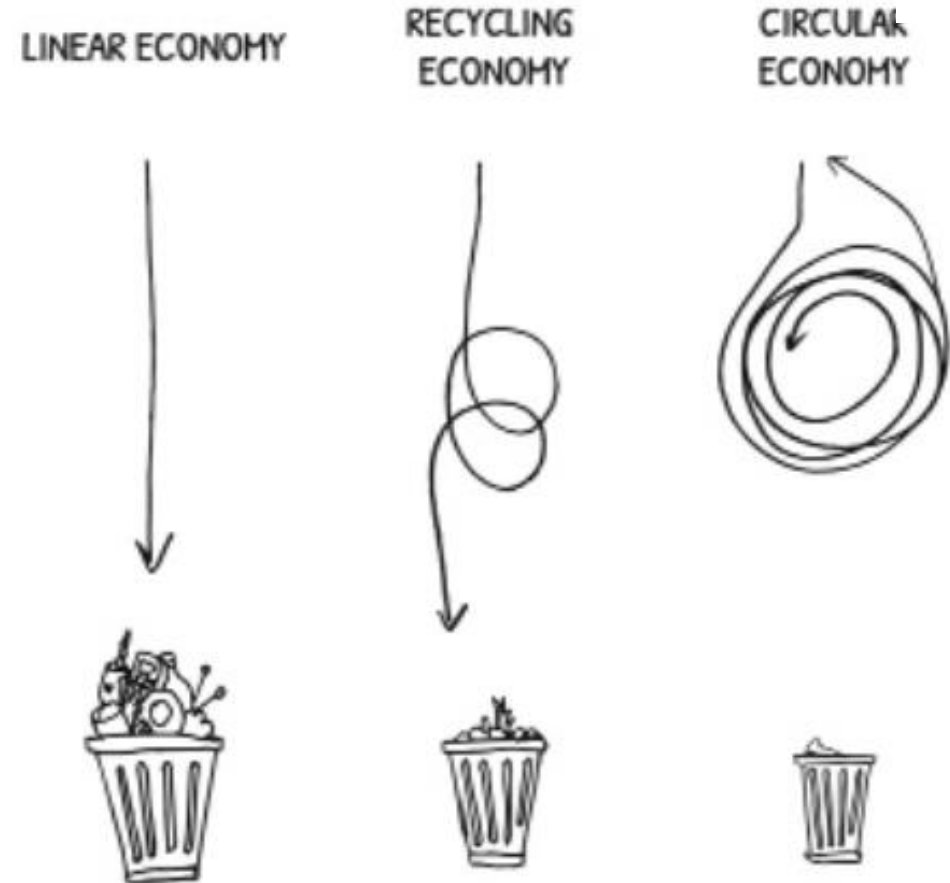



Figure 1: From a linear to a circular economy (Source: Circular Flanders, 2021)



How do we get there ?

[wmca-circular-economy-routemap.pdf](https://www.wolverhampton.gov.uk/media/1000000/wmca-circular-economy-routemap.pdf)

 ELLEN MACARTHUR FOUNDATION

It's time for a circular economy

Through design, we can eliminate waste and pollution, circulate products and materials, and regenerate nature, creating an economy that benefits people, business and the natural world.

[What is a circular economy?](#)





West Midlands' Circular Economy Routemap

Kickstarting the region's journey to a green industrial revolution



 West Midlands Combined Authority

 usefulprojects
part of the Useful Simple Trust

 SOENECS
Innovative Sustainable Solutions

Policy and Regulation

Governance

Capacity-Building

Soft Infrastructure

Hard Infrastructure



Understanding the Data

The region is

3.8 times

more reliant on non-renewable materials than renewable ones.



CARBON EMISSIONS BIODIVERSITY LOSS POLLUTION



72%

of waste from industry and manufacturing is re-processed, recycled or reused in some fashion every year.

26.3 million tonnes of minerals consumed in the region every year.

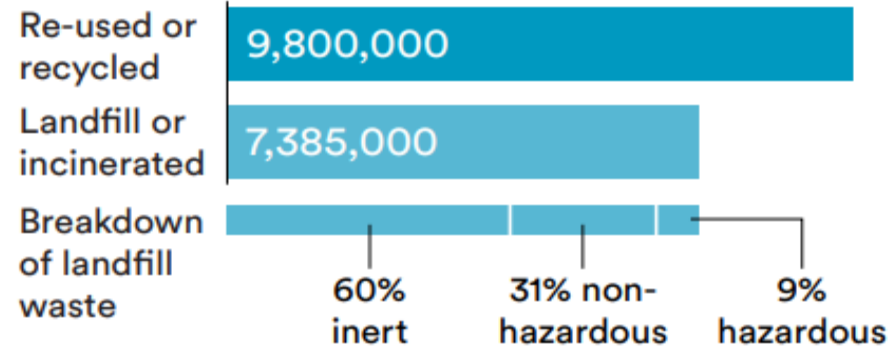
5.7 million tonnes of natural resources consumed in the region every year.

58%

of resources consumed in the West Midlands do not go to landfill or incineration each year.

7.4 million

tonnes of waste still end up in landfill or incinerated each year.



Food and agriculture sector

consumes 4.5 million tonnes of natural resources per year.

Housing sector

is largest consumer of energy and water in the region.

Transport sector

consumes 800,000 tonnes of natural resources per year.



Targetting Key Waste Sectors

Circular Manufacturing

Circular Food

Circular Construction

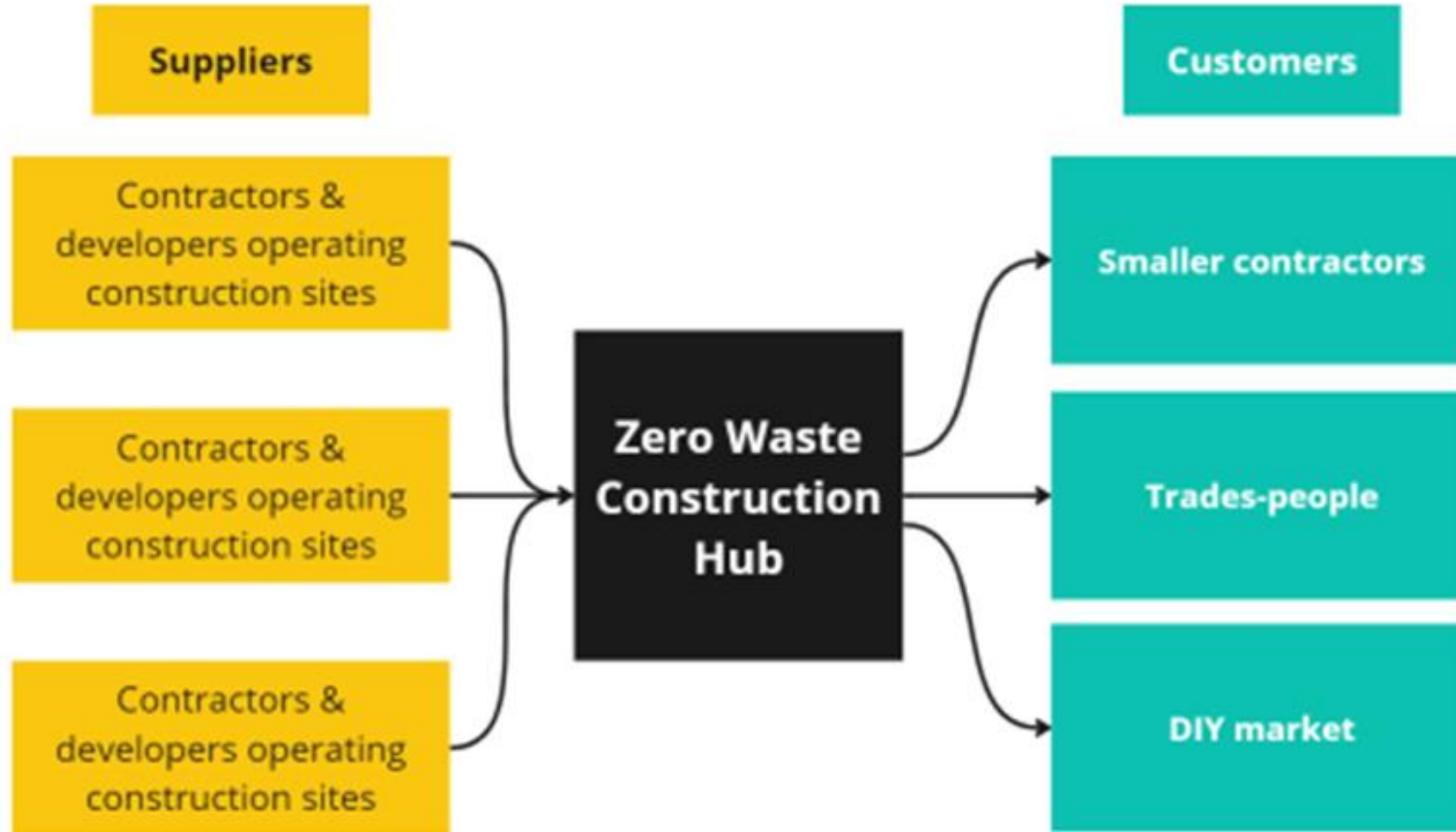
An opportunity For Wolverhampton?

- Strategic Position
- Brownfield institute UoW
- Centre for Sustainable Construction

Circular strategies for infrastructure
Circular building product initiative
Zero waste construction hub
Circular repurposing programme
Brownfield land reclamation

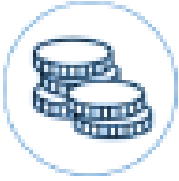

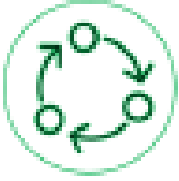





Zero Waste Construction Hubs – proposal





Zero Waste Construction – Benefits

Employment and Skills		Wider Environmental	
	Regional Economic Impact £1.5m of net societal benefits		Material Diverted from Landfill 3,375 tonnes of material diverted from Landfill
	Circular Economy Jobs 35 jobs created and supported in the circular economy		Embedded CO₂ avoided 4,000 tonnes of CO ₂ equivalent avoided by diverting from landfill
	Apprenticeships 15 Apprenticeships supported in the circular construction sector		Reduction in Disamenity £130,000 reduction in disamenity of landfill local area land/house prices



Any Questions?

Greener Together Forum

26th September 2023

Debbie Ward

[linkedin.com/in/debbie-ward-b61580](https://www.linkedin.com/in/debbie-ward-b61580)

debbie.ward@cirkloconsult.co.uk

- Director of The Rebuild Site CIC
- Director of Cirklo Consult, delivering Carbon Literacy and Circular Economy training & support
- Co-organiser of the Circular Economy Club Birmingham & West Midlands Chapter
- Sustainability West Midlands Associate
- Reuse & Circular Economy Associate, The Alliance of Sustainable Building Products

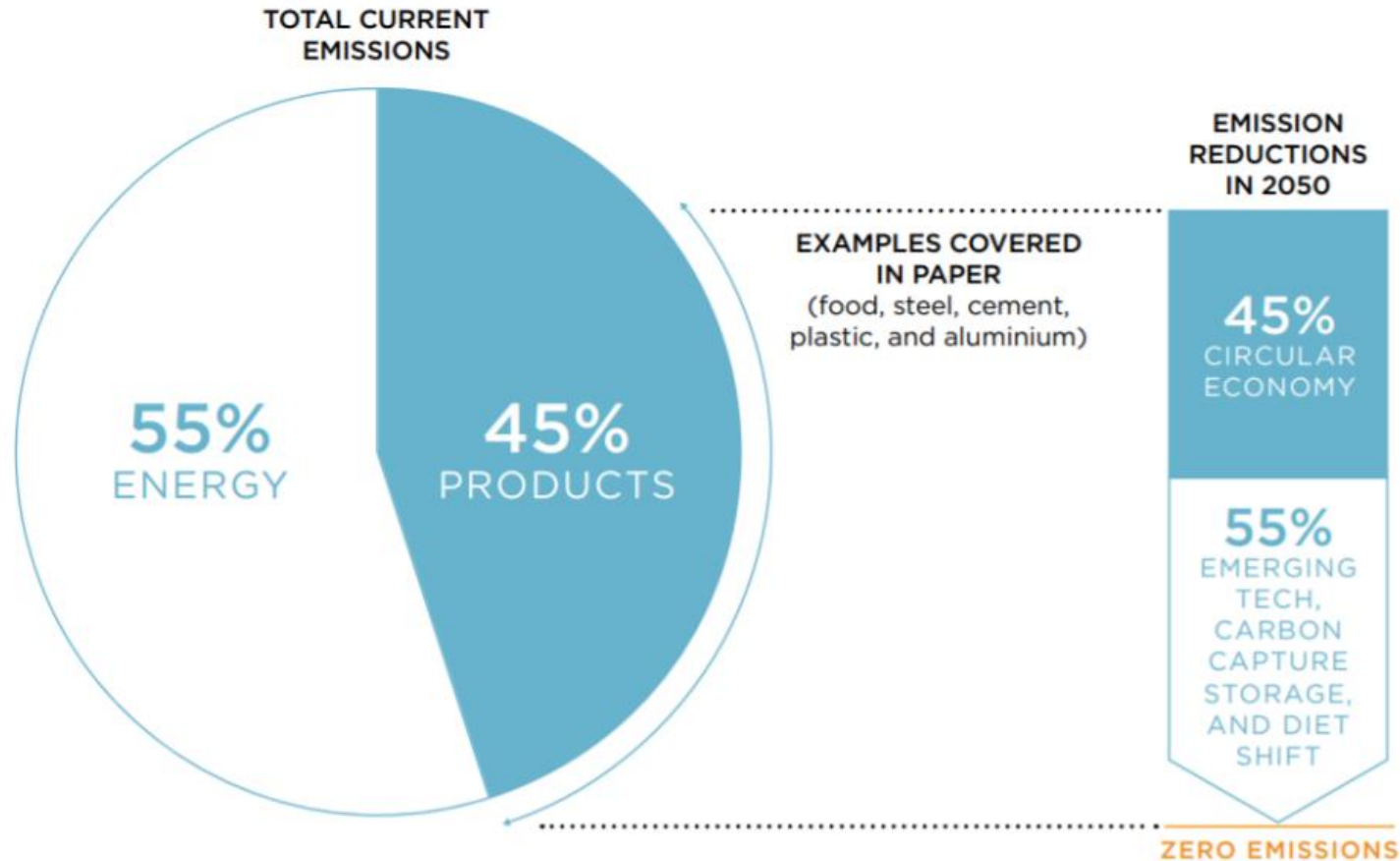
Why do we need to be more circular?



the
rebuild
site



Why do we need to be more circular?



Switching to renewable energy plays a vital role in addressing climate change, but this alone will not be enough. **In order to achieve targets on climate, it is critical that we transform how we design, make, and use products and food.**

Completing the picture through a transition to a circular economy can enable us to meet the needs of a growing global population, while creating a prosperous and resilient economy that can run in the long term.
- Dame Ellen MacArthur - Founder, Ellen MacArthur Foundation

WITHOUT INVESTMENT IN CIRCULAR BUSINESS, WE WON'T REACH OUR NET-ZERO GOALS

Circular business investments bring both climate-wins and resilient, risk-adjusted returns

Circular economy and Net Zero: How can carbon footprinting reinvent the mobile phone market?



Reaching Net Zero will require companies to rethink their business models. For the consumer electronics industry, this means enabling consumers to reuse and recycle mobile devices. To make this happen, a common language for communicating the benefits of refurbished devices is needed. Tianqi Li, an expert contributor to the Net Zero Intelligence Unit, and Chloe St George explain how.



Net-zero not possible without circular economy, Ellen MacArthur Foundation finds

Focusing on decarbonising the energy sector alone will not put the world within touching distance of a net-zero carbon economy, according to a new report from the Ellen MacArthur Foundation which claims that the transition to a circular economy is also vital.



WORLD GREEN BUILDING COUNCIL

Thought Leadership

[Home](#) > [News and Thought Leadership](#) > [To achieve net-zero, infrastructure must embrace the circular economy](#)

To achieve net-zero, infrastructure must embrace the circular economy

What is a circular economy?

It's a new way to design, make, and use things within planetary boundaries.

Shifting the system involves everyone and everything: businesses, governments, and individuals; our cities, our products, and our jobs. By designing out waste and pollution, keeping products and materials in use, and regenerating natural systems we can reinvent everything.

Source: Ellen MacArthur Foundation

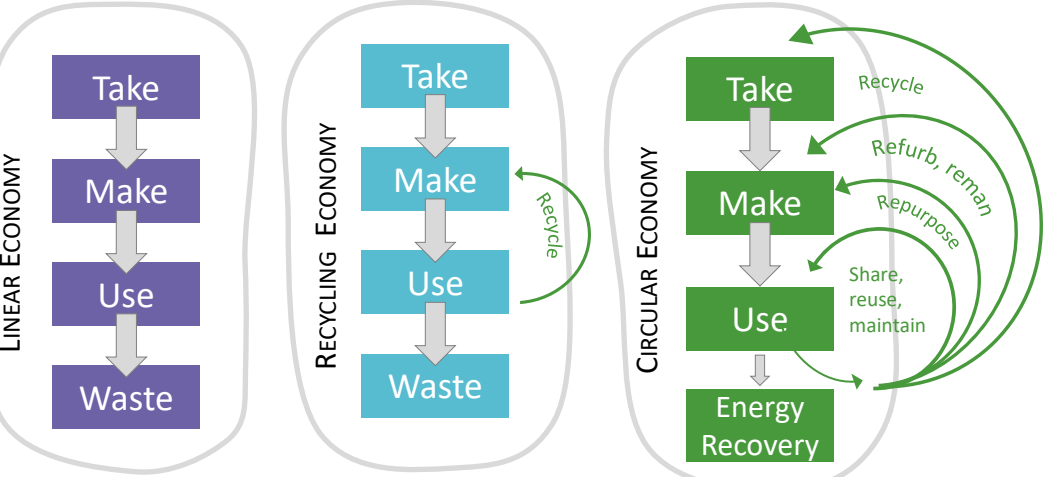


What is a circular economy?

1 Design out waste and pollution



2 Keep products and materials in use



Source: Cirklo, 2020

3 Regenerate natural systems



4 Powered by renewable energy



A circular economy is **restorative and regenerative** by design, and aims to keep products, components, and materials **looping** at their **highest utility and value** at all times.

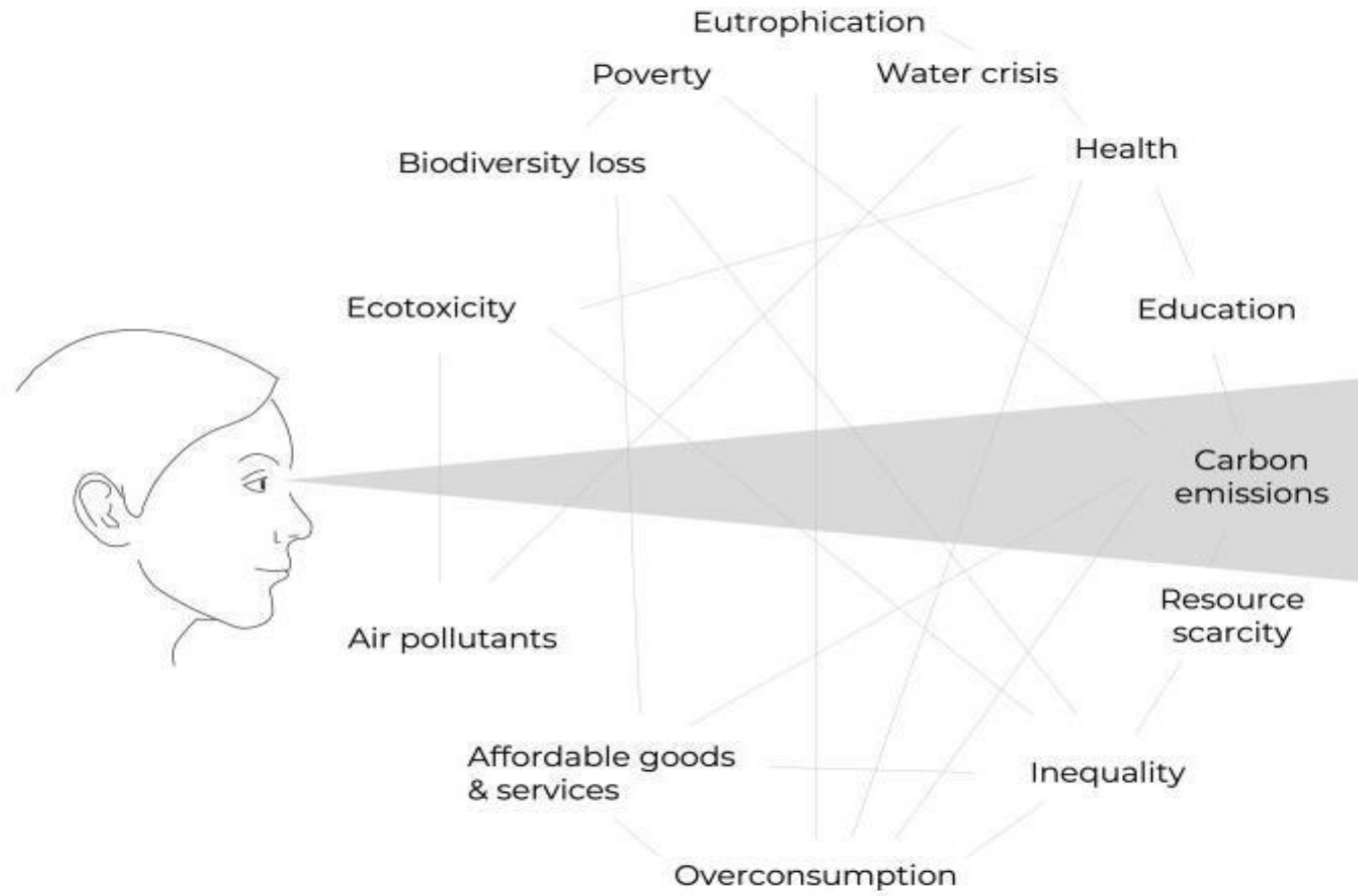
What is a circular economy?

Design is key to circularity and enables circular business models

- Design for long life (robust, hard wearing)
- Design for flexibility and adaptability (able to change to the users wants & needs)
- Design for maintenance and repair
- Design for disassembly (not only easier to repair and refurbish/remanufacture but also at end of life when the products is taken apart for components to be reused, repurposed or recycled)



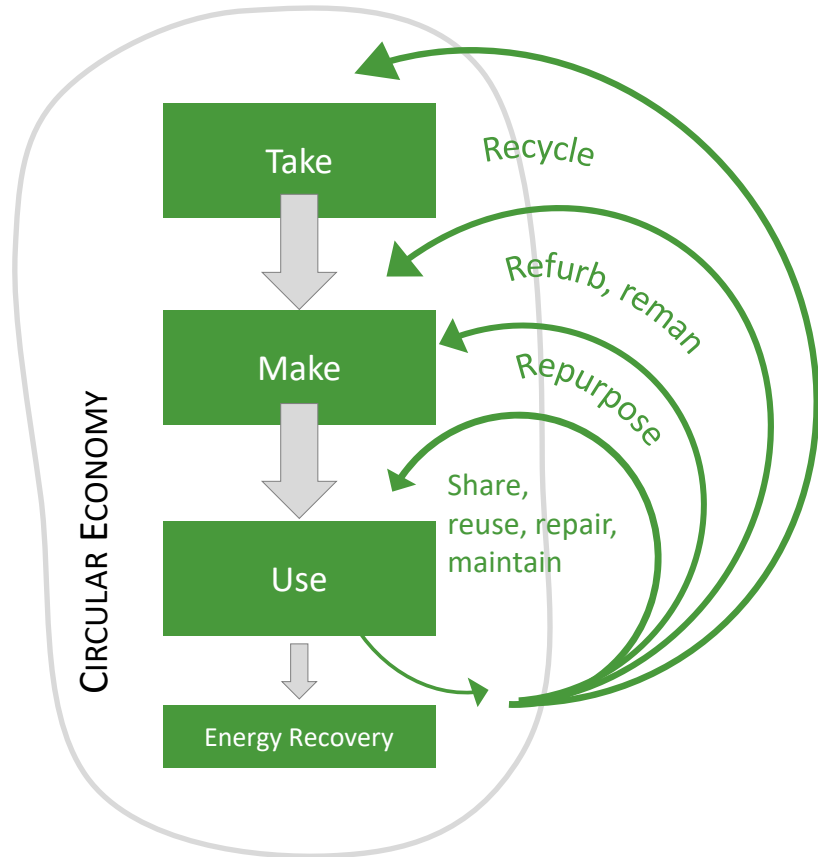
Carbon Tunnel Vision



Sustainability transition

the **rebuild** site

What is a circular economy?



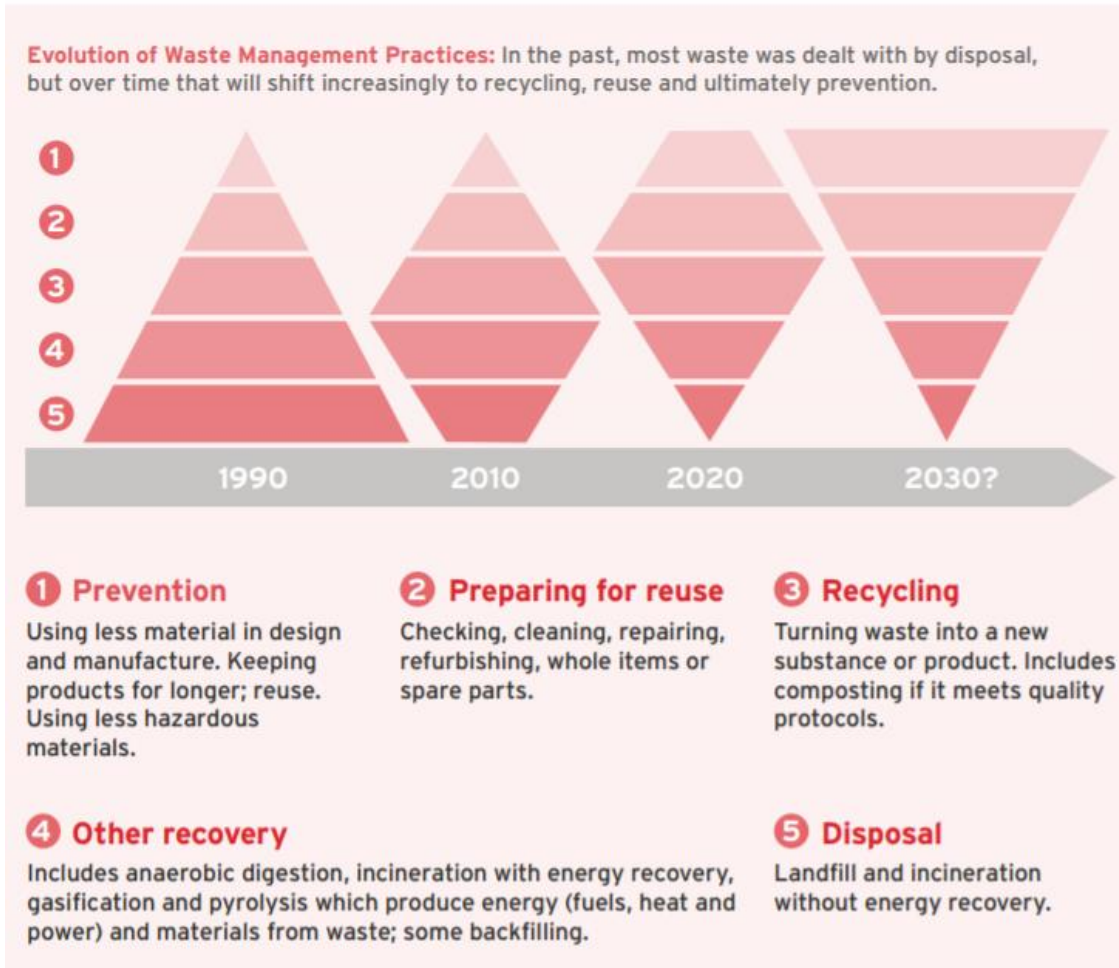
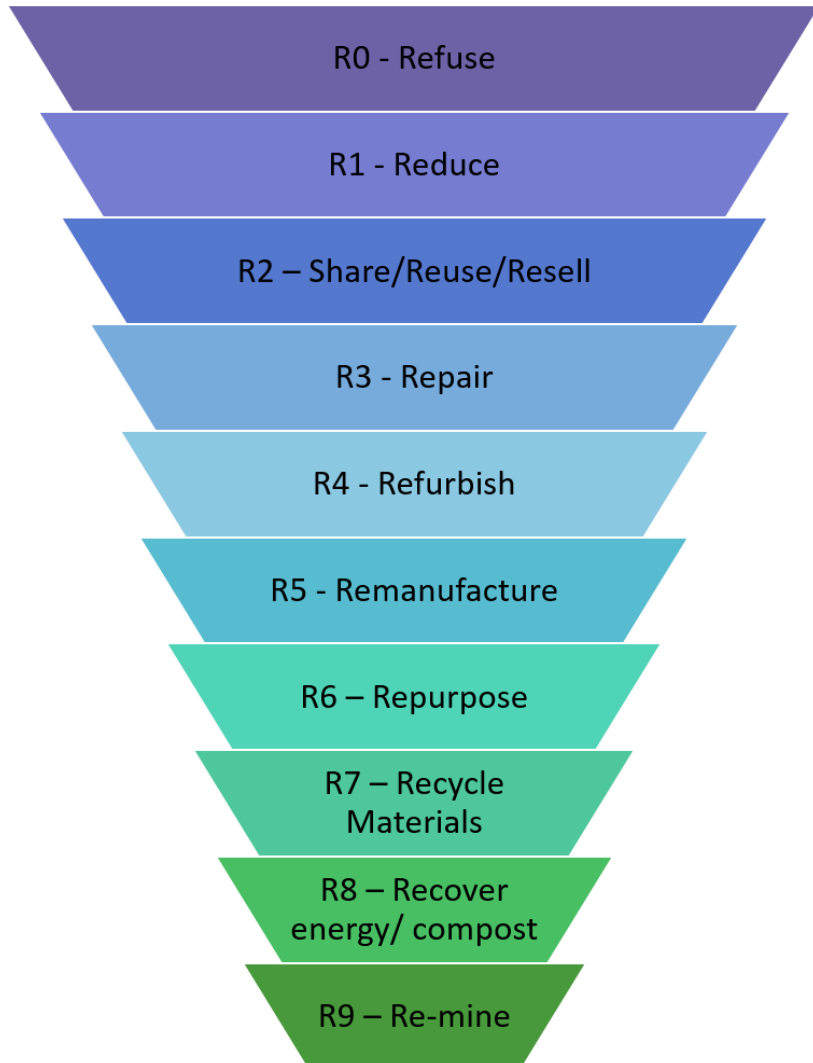
Doing more good, not just less bad by restoring and regenerating natural systems

the **rebuild** site

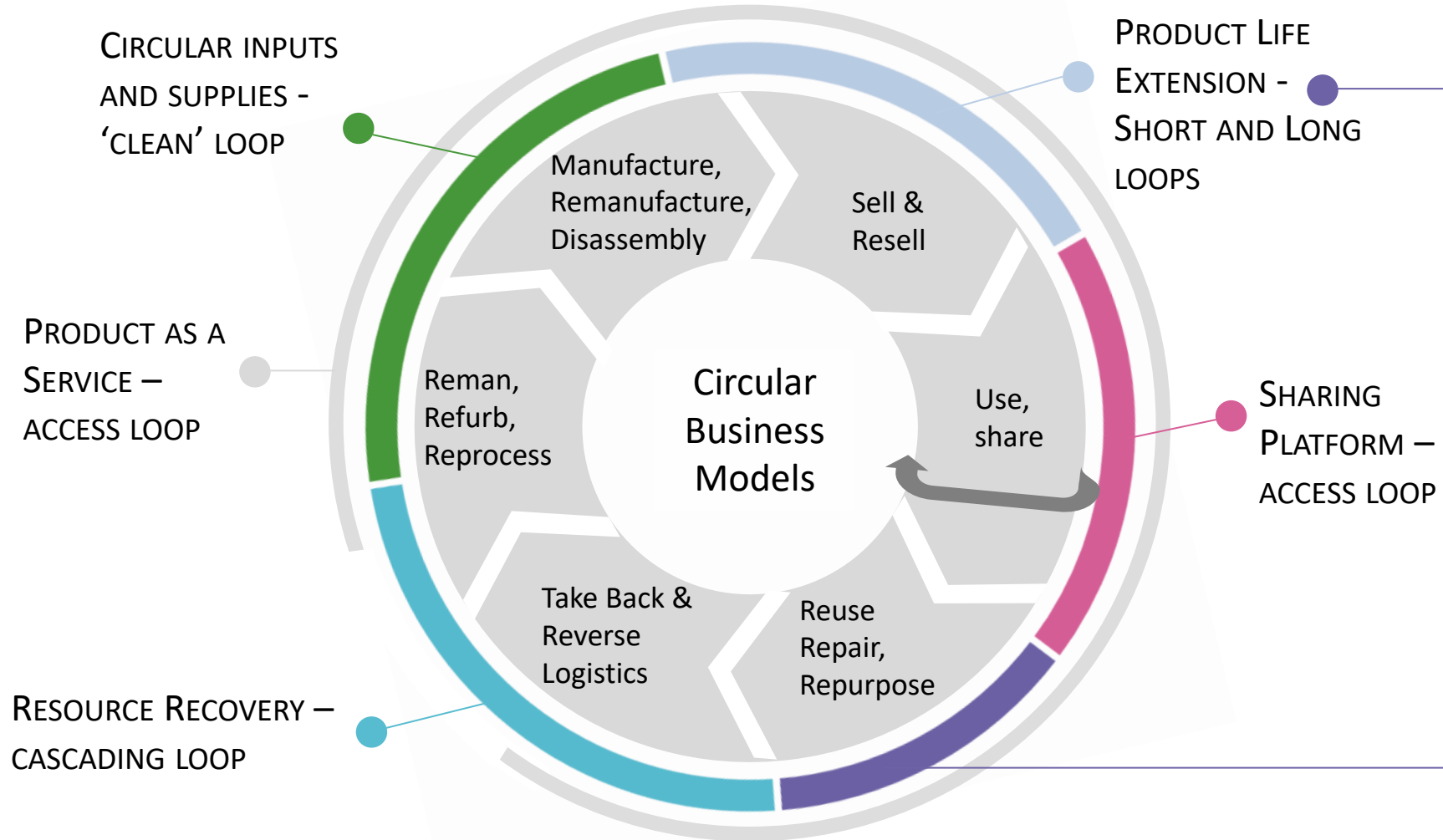
The circular economy gives us the tools to tackle climate change and biodiversity loss together, **while addressing important social needs.**

It gives us the power to grow prosperity, jobs, and resilience while cutting greenhouse gas (including carbon) emissions, waste, and pollution.

'Waste Hierarchy' Thinking



Circular Economy Business Models



the **rebuild** site



Product Life Extension

Built Environment: Materials Reuse

Our purpose is to encourage everyone to **rethink** how to better use materials, **reclaim** materials that are currently being thrown away or down cycled, and **reuse** as much excess and 'nearly-new' materials as possible, creating value in what is often treated as waste.

We were founded to:

- **Prevent usable materials going to waste**
- **Support local community projects**
- **Demonstrate by doing and data how a circular economy in construction can work**

the rebuild site

the rebuild site

info@rebuildsite.co.uk

TOOL LIBRARY CONTRACTORS WHAT'S IN STOCK MATERIALS FOR PROJECTS CIRCULAR ECONOMY ABOUT GET IN TOUCH

WELCOME TO THE REBUILD SITE CIC

We take surplus materials from construction sites and put them to good use.

Our purpose is to encourage everyone to **rethink** how to better use materials, **reclaim** materials that are currently being thrown away or down cycled, and **reuse** as much excess and 'nearly-new' materials as possible, creating value in what is often treated as waste.

The surplus materials we pick up go to community groups and charities to help with their building, gardening, crafting and repair projects. We also sell nearly new and surplus materials to trades and members of the public at reduced prices – perfect for that DIY project you're planning to get underway!

The construction industry drives 6% of UK GDP while contributing 60% (140m tonnes) of all UK waste – this equates to £6BN lost value from a £100BN annual industry turnover. The sector needs to get much smarter about resource use. By encouraging the reuse of existing surplus materials Rebuild is doing our bit to reduce waste and lower the amount of carbon used in creating new materials.

Product Life Extension

Built Environment: Materials Reuse



“Doing good with wood waste” – preventing usable wood being skipped for downcycling or incineration



the
rebuild
site

Steel, both as a material and a structural framing system, already has excellent circular economy credentials.

1942 - RAF aircraft hanger, London

1952 - aircraft hanger, Rotterdam

2015 - bus terminal, Schiphol airport, Amsterdam

Circular Inputs

Food Sector: Toast Beer

Uses surplus fresh bread to replace one-third of the malted barley in our grain bill. Bread is packed with carbohydrates, which are broken down to simple sugars by enzymes (Amylase) in the barley. Hops are added for aroma and bitterness, and to help preserve the beer, then yeast converts the sugars to alcohol during fermentation.



2,072,429

SLICES SAVED



42 TONS

EMISSIONS AVOIDED



£48,498

MONEY DONATED



171,848 M²

LAND RECLAIMED



1,757,047

PINTS RAISED



252,043 L

WATER SAVED

Resource Recovery

Textiles: Rapanui / Teemill

100 billion items of clothing are bought each year, and with 3 out of 5 t-shirts purchased today thrown away within 12 months, a rubbish truck of clothing is going to landfill every second.

Rapanui products are made from natural materials, using renewable energy, and everything they make is designed from the start to be sent back when it is worn out. They make new products with the material they recover.

Their t-shirts are produced in real-time, in the seconds after they are ordered. This conscientious application of technology has enabled a step forward in the conversation about sustainability. It is a different way of operating, and it works.

the
rebuild
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What makes our phones unique?

We care about tech and fair specs



Full-day battery life
3,040mAh capacity and replaceable



Recycled and fair materials
Fairtrade gold, recycled plastics and conflict-free minerals



64GB storage
Increase up to 400GB with SD card



Socially responsible
Living wage bonus for factory workers



Android 10
Fast and intuitive



Designed to last
World-leading modular and repairable design

the **rebuild** site

Product Life Extension

Tech Sector: Circular mobile phone

FAIRPHONE

[Products](#) [Story](#) [Community](#) [Business](#) [Contact](#)



[Smartphones](#) [Spare Parts](#) [Accessories](#)

Spare Parts

The most sustainable phone is the one you already own.



Fairphone 3
The phone that cares for people and planet

£ 369 ~~£389~~

- Modular and repairable design
- Recycled and fair materials
- 12MP and 8MP cameras
- Android 10

[Discover Fairphone 3](#)

Repair Cafes



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WORLDWIDE MOVEMENT

Besides the Netherlands, there are Repair Cafés in Belgium, Germany, France, the United Kingdom, the United States and in dozens of other countries around the world. Repair Café has even made its way to India and Japan!

38490
Estimated number of volunteers
involved

46188
Estimated number of items repaired
per month

2566
Repair Cafés

Libraries of Things

Libraries of Things are part of the sharing economy that supports a cleaner, cheaper, and more sustainable future.

They are one solution to a world fragmented by economic hardship, social division, and a diminishing sense of community.

More than just access to stuff, Libraries of Things foster community, relationship building, and local empowerment.

The best Libraries of Things start out building a place to borrow and share things—and end up become a place for community, from workshops and events to public forums and game nights.

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Adopting circular practices

- **Shared understanding:** define what moving to a circular economy is to your organisation, and ensure your team and your supply chain share that understanding, drive change through doing
- **Ask questions, start the conversation:** talk to your colleagues, suppliers and clients about climate change, carbon reduction and circular economy strategies, take people with you on the journey, learn, share, innovate... together
- **Procurement as a lever:** as an individual, a community and/or an organisation, use your buying power to support sustainable, circular products and services
- **Don't let 'imperfect' stop you:** start today, take your next step on the ladder from wherever you are now, don't wait for the perfect solution





- Making the West Midlands region more sustainable, fairer and greener for all
- Established 21 yrs in Birmingham covering the region, and beyond!
- Independent, not-for-profit company working across all sectors
- Our vision: The West Midlands is leading in contributing to the national target of net zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth
- Coordinate and monitor the only existing regional Sustainability Roadmap; a framework to 2030

[Phone: 07751 930625](tel:07751930625)

[Email: enquiries@swm.org.uk](mailto:enquiries@swm.org.uk)

<https://www.sustainabilitywestmidlands.org.uk/>





Carbon Literacy & Circular Economy in the Construction Sector

Carbon Literacy Project



Questions

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Textiles: Little Loop

Rent kids clothes which don't cost the earth. Save money and waste with unlimited styles from the best sustainable brands for a fixed monthly fee.

<https://thelittleloop.com/>

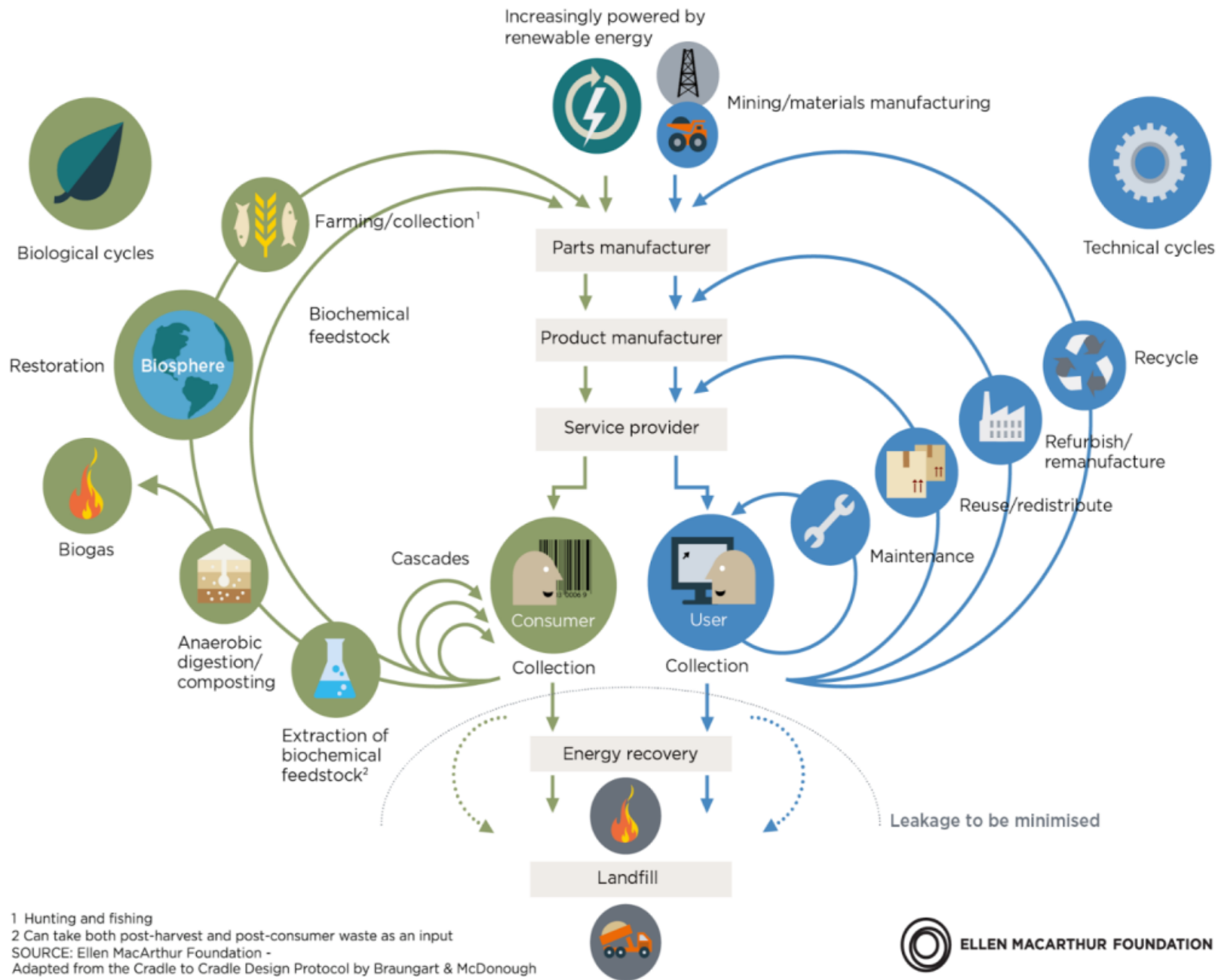


Textiles: Mud Jeans

In circular design, simplicity is key. There are two main materials that go into our fabrics: organic cotton & recycled cotton.



Every pair of MUD Jeans is recycled into a new MUD Jeans, leaving no waste and using 92% less water than an average jeans.



the **rebuild** site

An industrial system that is **restorative** by design - requiring a **system level rethink** which can deliver huge **opportunities** across every sector.

¹ Hunting and fishing

² Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation -

Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough



ELLEN MACARTHUR FOUNDATION

Built Environment: Redevelopment



A study of residential buildings in the United Kingdom claims that 46 percent of demolished structures were between 11 and 32 years old at the time of their demolition

55 Baker Street represents the radical reinvention of a 1950s office building - 70% of the original building structure was reused. Targeted demolition was carried out to remove only the most constraining parts of the old building and replace them with new modern structures sympathetically inserted amongst the original, increasing the total floor area of the property by 30% to 56,000 m².

Built Environment: Design for Deconstruction



Triodos Bank HQ

The building was constructed using laminated timber, cross-laminated timber and unprocessed timber components that are joined together using screws, meaning they can be unscrewed and reused. It is claimed to be the first large-scale 100 per cent wooden, remountable office building, and is an example of the trend towards reversible design, which allows building materials to be reused in line with the principles of the circular economy.

Food Sector: Notpla

the
rebuild
site

Ooho and our other packaging solutions are made from Notpla, a material made from seaweed and plants that disappears naturally.

Ooho is a flexible packaging for beverages and sauces. Ooho biodegrades in 4-6 weeks, or you can just eat it, making it ideal for on the go consumption.



Tech Sector: Circular laptop

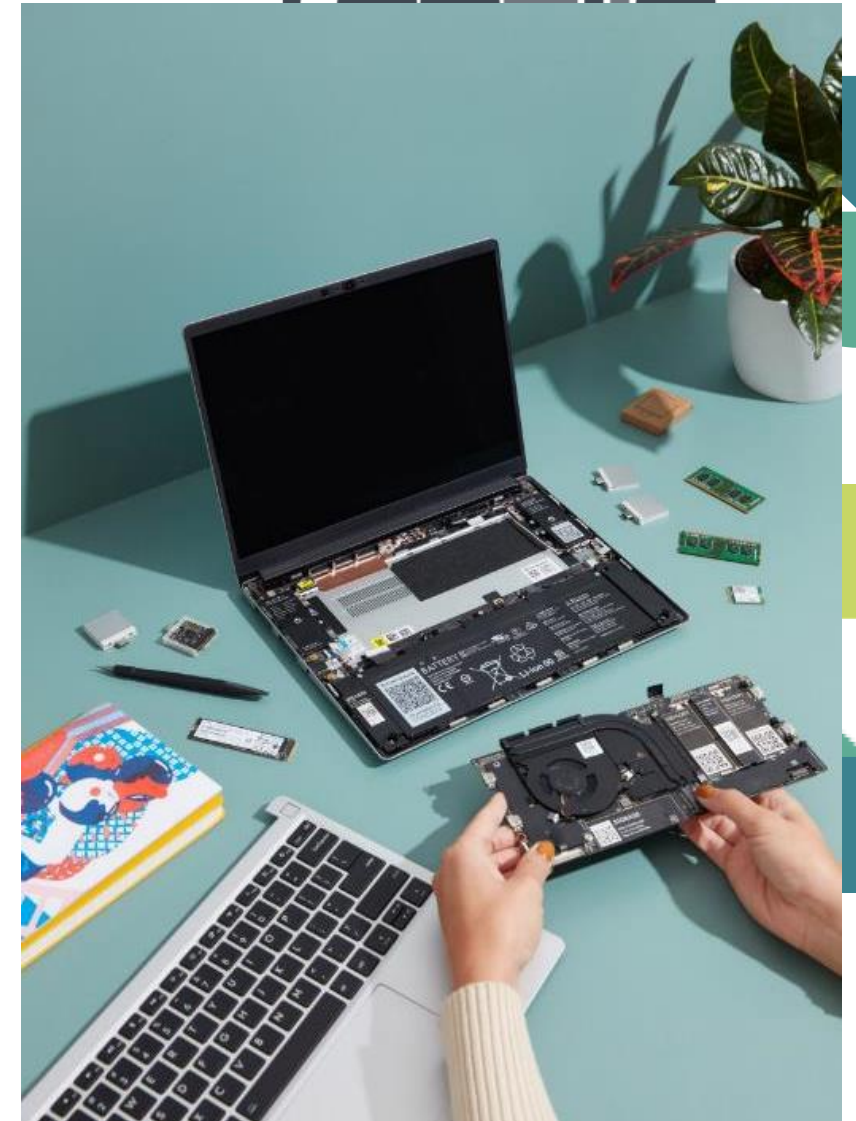
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American company Framework has designed a laptop with modular components that can be repaired and replaced to increase the product's lifespan while reducing e-waste.

The Framework laptop is available in either a preassembled or a DIY version that customers can assemble themselves. It comes with a screwdriver and spudger to allow owners to easily customise, upgrade and repair their device.

Individual components such as the motherboard can be repurchased, reused or broken down and recycled, to help facilitate a more circular economic system.

<https://frame.work/gb/en/laptop>





Decarbonization Net Zero and the Business Energy Advice Service (BEAS)

Programme Overview and Objectives

Pilot Context/background

The West Midlands has a higher proportion of energy exposed (largely manufacturing) businesses than any other UK region. These businesses are threatened by both rising energy costs and the need to transition to net zero. Because of their relatively small size and dispersed nature, attempts to improve their energy efficiency and resilience are hampered by significant market failures.

Government does not have access to a large enough data set of rich, consistently formatted data on energy efficiency potential to base future policy on and would like to trial an approach to overcoming barriers to SME investment in EE.

Targeted public investment can reduce or remove market failures to support continued regional competitiveness and growth and provide a large data set to drive policy decisions.

Objectives

- Energy demand reduction for SMEs
- Data to inform future policy.

Expected Secondary Effects

- *Increase in regional Energy Productivity by reducing energy input required as % of regional GVA*
- *Increase in productivity from new investment in new processes.*
- *Supply chain energy resilience*
- *Protection of skilled jobs*

Activities

- Energy and Resource Efficiency Assessments providing businesses with clear information on where and how energy savings can be made
- Grants to encourage investments in energy efficient manufacturing and process equipment and buildings measures.

Outputs

- £15.5m in grants delivered to regional SMEs for energy efficient manufacturing and process equipment and buildings measures.
- Contributing to at least 4000 Energy Assessments and Roadmaps including recommendations
- Recommendations for energy reduction acted upon by SMEs with and without grants



→ Decarbonization Net Zero

Providing immediate support to businesses so that they can deliver on net zero and in so doing enhance their competitiveness and sustainability

<https://www.businessgrowthwestmidlands.org.uk/business-support/decarbonisation-net-zero-programme/>

➤ £4.5 million

- Expert Information and Advice to over 2000 businesses
- 1437 Energy Efficiency Assessments

Net Zero Grants

➤ £4.5 million

- Grant funding up to 50% matched
- Can be used for renewable energy applications

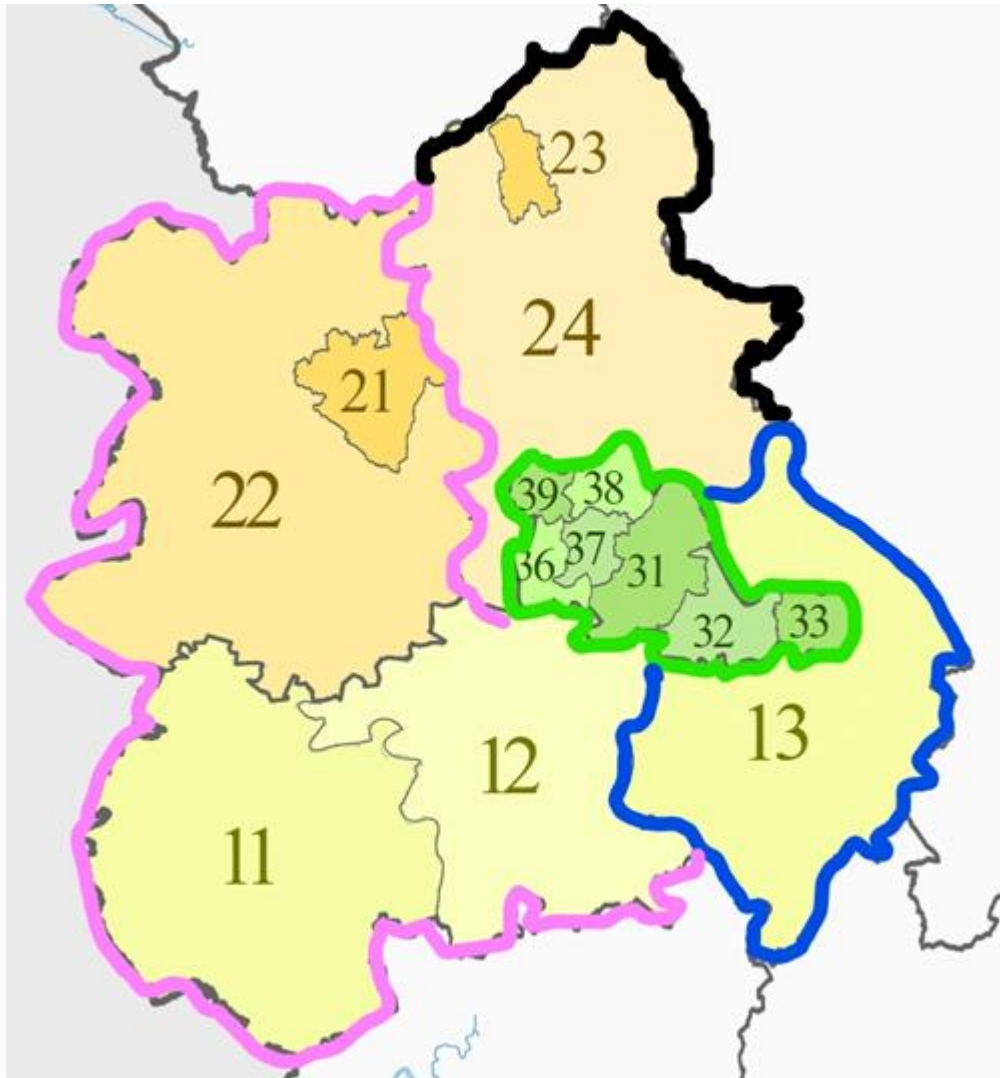
→ Business Energy Advice Service (BEAS) Pilot

Building on SPF funded programmes across the West Midlands to provide more support and grants for energy demand reduction and data to inform future policy

➤ **£9 million**

- ~2600 Energy Efficiency Assessments
 - Including 400 Energy Intensive Assessments
- Linked to the DNZ Programme in the WMCA area and other programmes across the west Midlands

Counties Involved within BEAS



DNZ Programme, WMCA region



BEEP covering Worcestershire and the Marches



Warwickshire programme



LC BEP Stoke and Staffordshire

Audit Stages

Standard Audits

Energy and resource efficiency assessments at business level

Energy Intensive Audits

Targeted at higher energy users with more complex needs and including some element of roadmapping, as needed.

Higher number of interventions =
small projects, small grants etc

Fewer high intensity = longer
projects, bigger grants

→ **Business Energy Advice Service (BEAS) Pilot**

➤ **£5 million in Grants**

- across Worcestershire, Stoke and Staffordshire and Warwickshire

➤ **£10.5 million in Grants**

- for the WMCA Area
- cannot be used for renewables

**How do you imagine
transport in your
community in five
years' time?**

