Kickstarting the West Midlands' Circular Economy

West Midlands Combined Authority

#WM2041

Introduction

As the largest economy outside of London and the birthplace of the industrial revolution, the West Midlands has a duty to lead the fight against climate change.

West Midlands Combined Authority declared a climate emergency in June 2019 and set a target date to reach net zero carbon emissions by 2041. The COVID-19 pandemic has since forced us to adapt our daily lives and rethink the other changes we could make to our business, personal lives and the systems that underpin our economy and society for the better.

WM2041: A Programme for Implementing an Environmental Recovery sets out how we can achieve this goal and identifies the need to kickstart the circular economy for the region as a key priority.

By developing a circular economy for the West Midlands, we open new opportunities to generate economic advantage, safeguard existing jobs and create new ones.

Similar approaches are underway across the world's leading cities and demonstrate the significant opportunities that will be fundamental to resetting, rebuilding and recharging our region post COVID-19 through a green recovery.

If we are to realise this moment of opportunity, we need active participation from businesses both small and large, from our communities and our public sector.
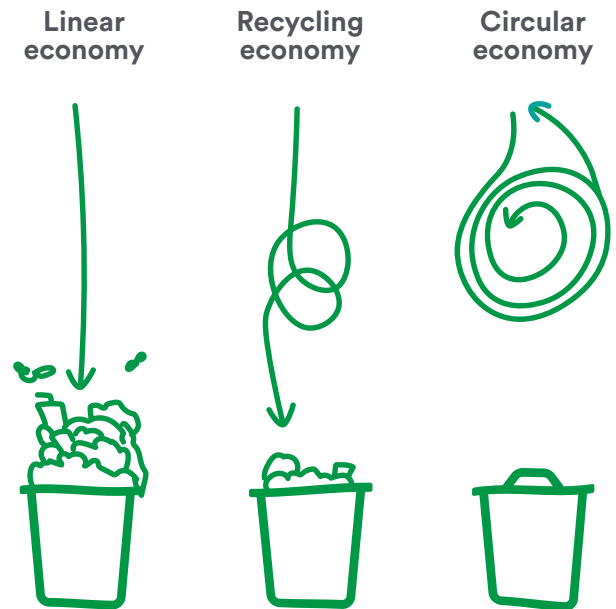
Please take the opportunity to get involved and help kickstart the West Midlands' circular economy.

What is a circular economy?

A circular economy provides an alternative to the current linear economy – one in which we make, use and dispose of products.
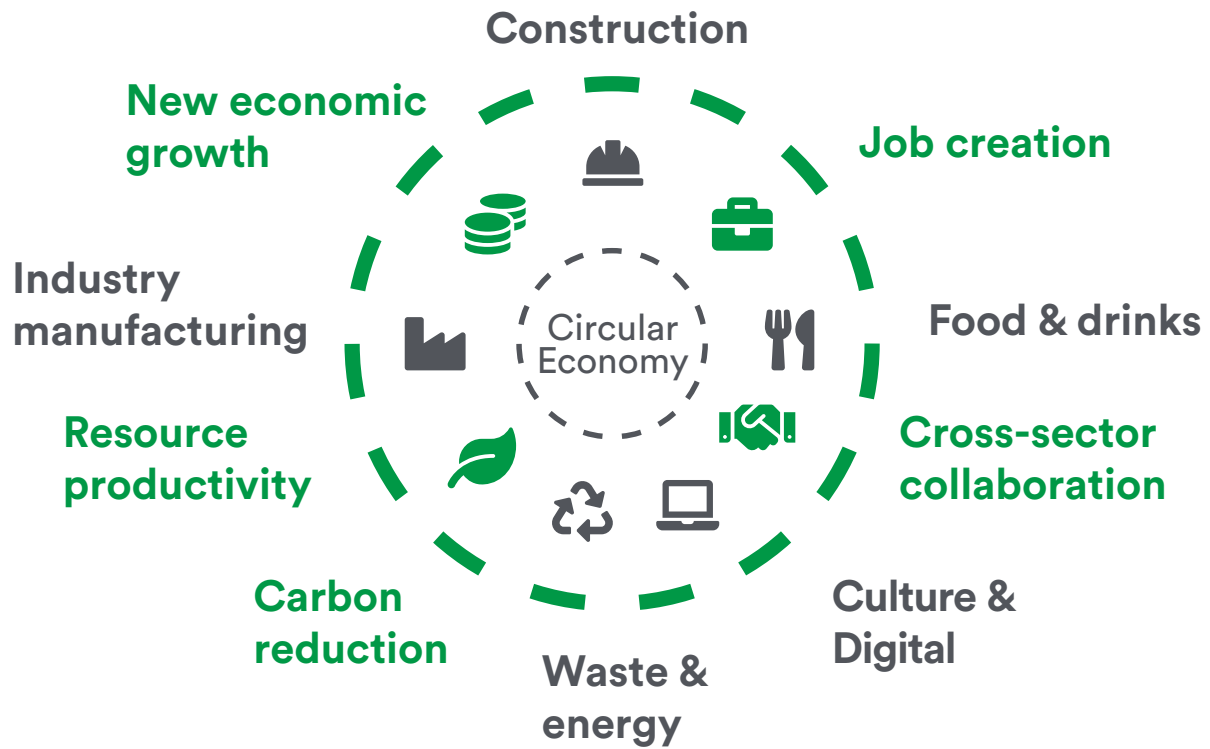
It designs out waste and pollution by reusing and repurposing products and materials that would normally be discarded. In doing so, it decouples our economic growth from the consumption of finite resources.

To achieve this, businesses and other organisations look at their processes to consider ways to reduce waste and make it possible to reuse the items they create. This could be through a returns policy or making new products from waste material.

Linear economy

Recycling economy

Circular economy

Business Models

Model	Purpose	Examples
Circular Supplies	Fully renewable, recyclable or biodegradable resource inputs	Biohm materials and buildings, Notpla packaging.
Resource recovery	Eliminate material leakage and maximise economic value through looping of materials.	Teemill t.shirts, Dyecoo dyes, automotive sector closing plastics and metals loop
Product life extension	Design for reuse, repair, remanufacture to extend current lifecycle	Caterpillar Reman engine blocks, Herman Miller chairs, Fairphone mobile phones.
Sharing platforms	Facilitate collaboration through sharing of products and assets that have a low ownership or use rate	Zipcar, Library of Things.
Product as a service	Access not ownership, leasing models, pay-per-use vs current buy-to-own model	Philips 'pay per lux' lighting, Bundles washing machines internet enabled 'pay per wash'.

Examples of Drivers and Sectors for a WM Circular Economy

A circular economy uses materials and resources more efficiently, reducing the levels of greenhouse gases produced. A study by the Ellen MacArthur Foundation, a leading think tank in this space, tells us that:

"To date, efforts to tackle the [climate] crisis have focused on a transition to renewable energy, complemented by energy efficiency. Though crucial and wholly consistent with a circular economy, these measures can only address 55% of emissions.

"The remaining 45% comes from producing the cars, clothes, food, and other products we use every day. These cannot be overlooked. The circular economy can contribute to completing the picture of emissions reduction by transforming the way we make and use products."[1]

1. Completing the picture', Ellen MacArthur Foundation, 2019

Case studies

Interface

Interface is a global commercial flooring company with its UK headquarters in Birmingham. Its founder Ray Anderson declared that Interface was committed to becoming the world's first environmentally sustainable and restorative company. Experimenting with renewable and recyclable materials, they've been leading the way to reduce the carbon footprint of their products. Now, every flooring product they offer, whether carpet, luxury vinyl tile or rubber, is 100% carbon neutral. They also have a re-use proposition for their products called ReEntry.[2]

Paint360

Paint360 Ltd is based in Cradley Heath[3] and was established to tackle the huge issue of waste paint disposal. It is estimated by DEFRA that around 55 million litres of paint are thrown away each year in the UK alone. Traditional disposal routes include incineration and landfill which are extremely wasteful and damaging. Paint360 receives waste paint from Household Waste Recycling Centres, contractors and retailers which is re-engineered back into an award-winning range of emulsion paints with a minimum 60% recycled content. This paint is then sold direct to the market or through the UK's largest builder's merchant. It is used in social housing, facility management and construction.

2. www.interface.com
3. https://www.paint360.co.uk/case-studies

Aceleron

Aceleron are a Birmingham-based developer of sustainable and reusable batteries. Their circular economy battery technology aims to negate the challenge of the waste from lithium-ion batteries. Such technologies are currently rarely reused or recycled and the electric vehicle (EV) industry is expected to create more than 11 million tonnes of battery waste a year in the next 20 years globally. Aceleron are advancing research into 'end-of-life' battery cell and module repurposing, whilst offering immediate reuse opportunities for waste battery packs to help reduce carbon emissions and underpin the clean energy revolution.

What are the benefits of a circular economy approach?

There are significant advantages of moving to a circular economy – it's more efficient, less wasteful, builds resilience and can help businesses gain a competitive advantage. As we recover from the coronavirus pandemic, we want to reimagine how we live and work to recharge our economy in a way that protects and enhances our environment.

A recent report by the Waste and Resource Action Programme (WRAP) tells us that "by 2030, on the basis of the current development path[4], the circular economy could create over 200,000 gross jobs and reduce unemployment by around 54,000" along with a £75billion net GVA increase for the UK economy.

It also has a positive social impact as it can give communities access to good quality re-used items at a lower price than a brand new product.

4. 'How moving to a Circular Economy can help the UK to build back better', WRAP, 2020
5. Aceleron case study image courtesy of Shell

What is the role of cities and regions in achieving a more circular economy?

Circular economy is a business opportunity, but cities and regions have a key role in creating places where these businesses can flourish. Many cities and regions across the globe are embracing circular economy as a central part of their identity including London, Glasgow, Amsterdam, Paris and New York.

One thing is for sure, a circular economy cannot be achieved by one business or one regional authority working by itself. It requires the input and support of businesses, the public sector and community organisations to identify the common barriers, opportunities and new approaches that create the conditions for collaboration that a circular economy relies upon.

Creating a Circular Economy Route Map for the West Midlands is the first step towards this.

Get Involved

We are working to develop a circular economy for our region and would like to hear from you.

Share your thoughts and have your say at wmca.org.uk/CircularEconomy

Useful resources to get started

Ellen MacArthur Foundation – an introduction to circular economy: https://youtu.be/A5wn_iinbxw / https://www.ellenmacarthurfoundation.org

Circular Economy Club

Circular Economy Club Birmingham and West Midlands LinkedIn group

C40 report – Municipality-led circular economy case studies

International Synergies BASIS project