

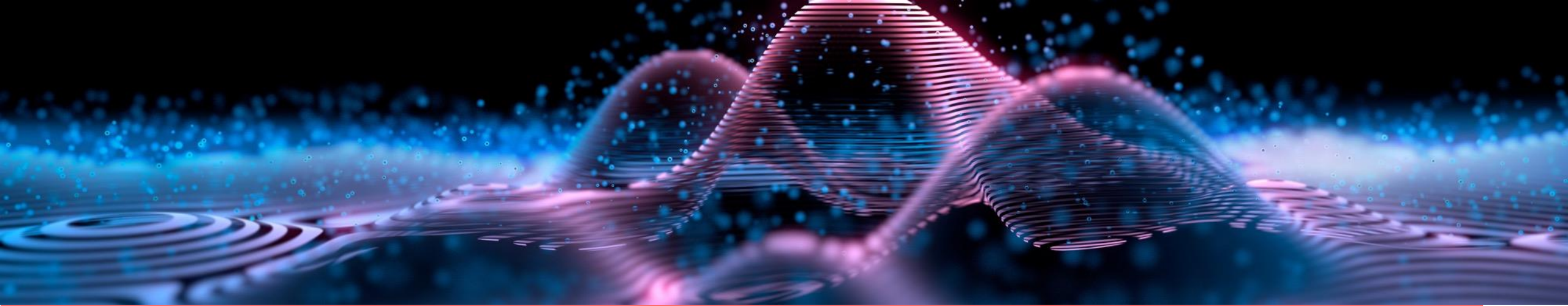
Net Zero Living: Meet The Innovator - Webinar Series

Webinar 3: Consumption and the Circular Economy

7th April 2025



Innovate
UK



Our Purpose & Vision

We are part of Innovate UK, the UK's innovation agency.

We create diverse connections to drive positive change.

To establish a network of innovators so powerful its ideas will change the world.



Innovate
UK

Business
Connect

Our Network



46,229
Unique
Organisations



72%
Small

15%
Medium

13%
Large



335,478
innovators



**Every university
in the UK**



**Innovate
UK**

**Business
Connect**

Innovate UK Net Zero Living Programme



A £60 million, three-year programme that aims to help places and businesses across the UK to **accelerate** the delivery of the transition to net zero.

Two core focus areas

Providing support to 52 local authorities, their partners and communities to overcome non-technical systemic barriers to the scaling and adoption of net zero solutions.

Supporting businesses to better understand and respond to the needs, opportunities and barriers preventing the large-scale roll out of net zero solutions.



<https://iuk-business-connect.org.uk/programme/net-zero-living/>



Innovate
UK

Business
Connect



**Bex
Trevalyan**

Library of Things



Alex Forrest

Eunomia



**David
Greenfield**

SOENECS



Innovate
UK

Business
Connect

LIBRARY OF THINGS

**Making borrowing
better than buying
for people & planet**

Offer for councils, 2025



The problem

Consumerism isn't working



For individuals



For communities



For the planet



Our journey

2014: a grassroots experiment helped spark a global movement



Forbes



EveningStandard.

The Guardian

Daily Mail



Positive.News

Key learning

It's harder than it looks!

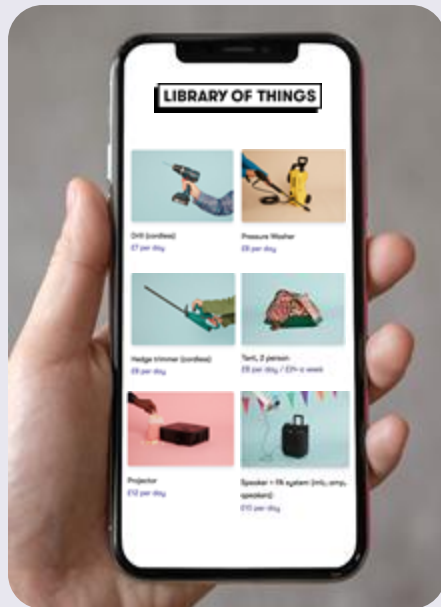
For every product that you lend, you need to:

- source it
- package it
- insure it
- list it in a catalogue
- promote it
- maintain it
- chase or replace the missing parts...



Solution: End-to-end operator

Community trust-building, tech & operations

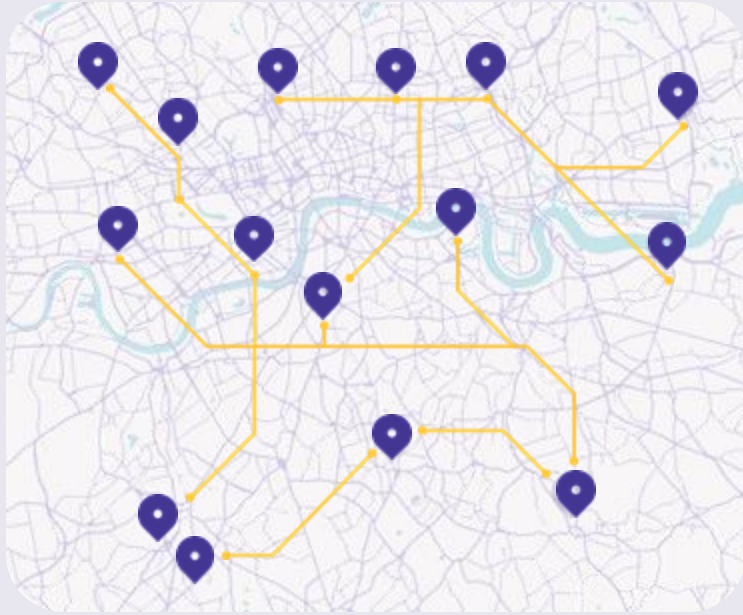


Partnerships with trusted brands:



Case study

London: Sharing library city



🏠 **21 neighbourhoods** across the city

🔧 **60k shares** of 600 quality products

🌍 **1.2k tonnes** emissions diverted

💰 **£8+ million** saved by residents

🔧 **70% members** report wider behaviour change



Case study

Hackney Council



"LoT is affordable for our residents, reduces waste & is part of our Net Zero 2040 commitment."

Hackney Council gives:

- Space in Dalston Library
- ~£40k upfront commission
- Comms

LoT gives:

- Upfront:
 - Engagement & launch campaign
 - Item procurement
 - Locker design/install etc
- Ongoing:
 - Marketing
 - Maintenance
 - Customer service
 - Impact reports etc

Impact

Member stories



Save money

"We saved on our energy bills"



Reduce waste

"We reduced single use plastic"

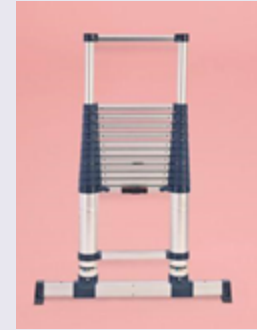
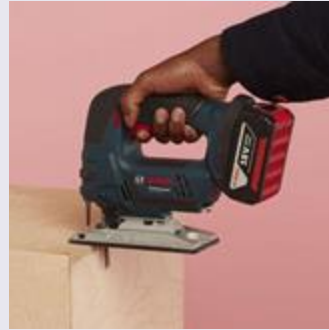


Learn new skills

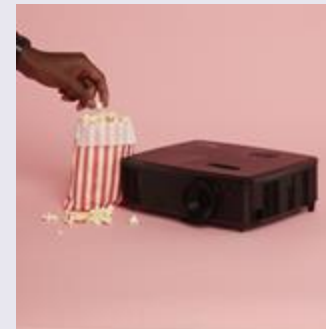
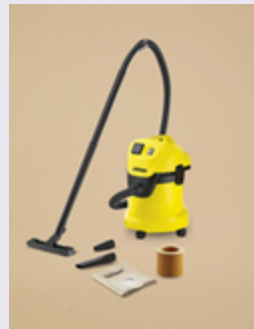
"We learnt sewing skills & met neighbours"

Good to know

Our most borrowed Things



DIY & repair Things



Cleaning Things

Events Things

Gardening Things

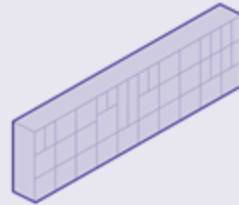
Next steps

Resources you need to *get started*



1. An initiator team & community support

Option 1
5-7 m



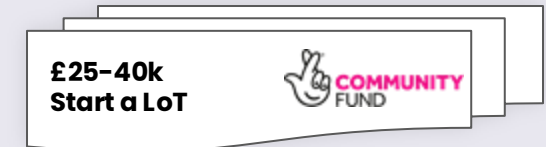
Option 2
5 sqm



2. A host space

Eg. library, hub or shop

- Good footfall & accessible
 - Open 6+ days per week
- Space for lockers or shelves
 - Rent-free



3. Set-up funds

Funds typically via climate funds, CIL, combined authority, grants, crowdfunding...

A sharing library for your town or city?



Rebecca Wetten
rebeccawetten@libraryofthings.co.uk

LIBRARY OF THINGS



Consumption and the Circular Economy

Who we Are



Eunomia: We are a leading international environmental consultancy focusing on data-driven **circular economy**, **natural economy**, and **carbon economy** policy, programmes, and systems. We provide an un-biased and evidence-based picture of what matters to our clients.

Our experience providing advocacy and research for major brands demonstrates that we find useful information and precise results that lead to **cost savings**, **better compliance**, and **improved sustainability outcomes** for our clients. Our work is based on thorough data analysis and stakeholder engagement, ensuring that our solutions are practical and effective.

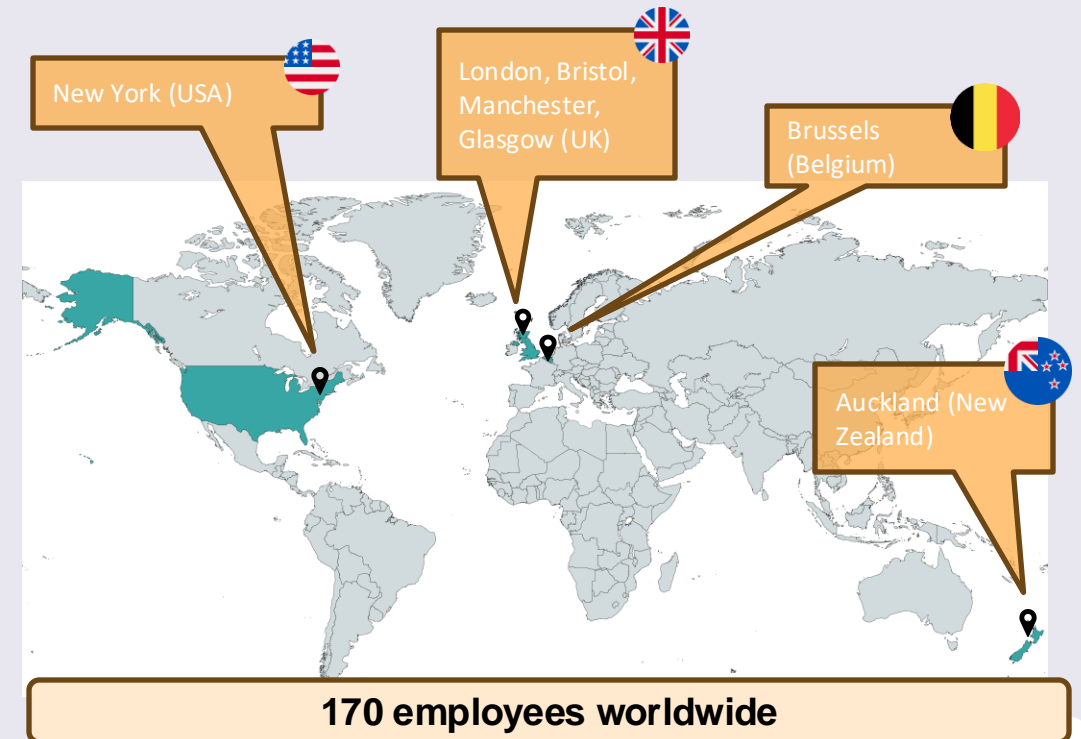
OUR VISION & APPROACH

- 23 years of adapting global best practices to provide evidence-based solutions.
- Providing unbiased advice to the public, private, and NGO sectors.
- Leading internal experts in the carbon, circular and natural economy.

OUR VALUES



OUR OFFICES WORLDWIDE



Choosing Eunomia as your partner means gaining access to a team of experts dedicated to helping your business thrive in a complex regulatory environment. Our tailored solutions, proven methodologies, and proactive approach ensure that your business remains compliant, cost-efficient, and competitive in the global market.

Who we Are

Eunomia has over 20 years of experience supporting public and private sector bodies to make service and business changes. We have a strong track record of helping businesses to understand sustainability and implement change.

Our clients

National, Regional Government



Supranational Government



NGO and Industry Associations



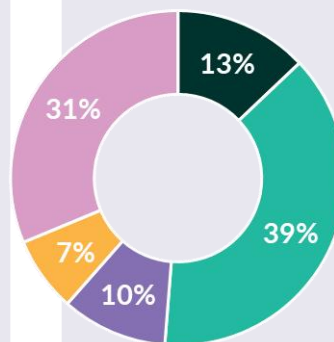
Local Government



Private Sector



eunomia



Our Services



Policy

Our in-depth knowledge and involvement in policy means our advice is second to none, and our lived experience of delivering such a vast range of projects gives us unrivalled foresight.



Strategy

We devise strategies to reduce the harmful impact of waste and surplus resource use on the planet. We then find new ways to reuse many of these resources to benefit society and the planet.



Implementation

Our applied expertise and technical skill support clients to understand, and then reduce, their socio-environmental impact. We can help make environmental conservation and preservation easier.

What would Circular Cities look like?

Buildings

- Maximising reuse through retrofit, refurbishment first
- Reuse of deconstructed assets
- Buildings as material banks

Transport

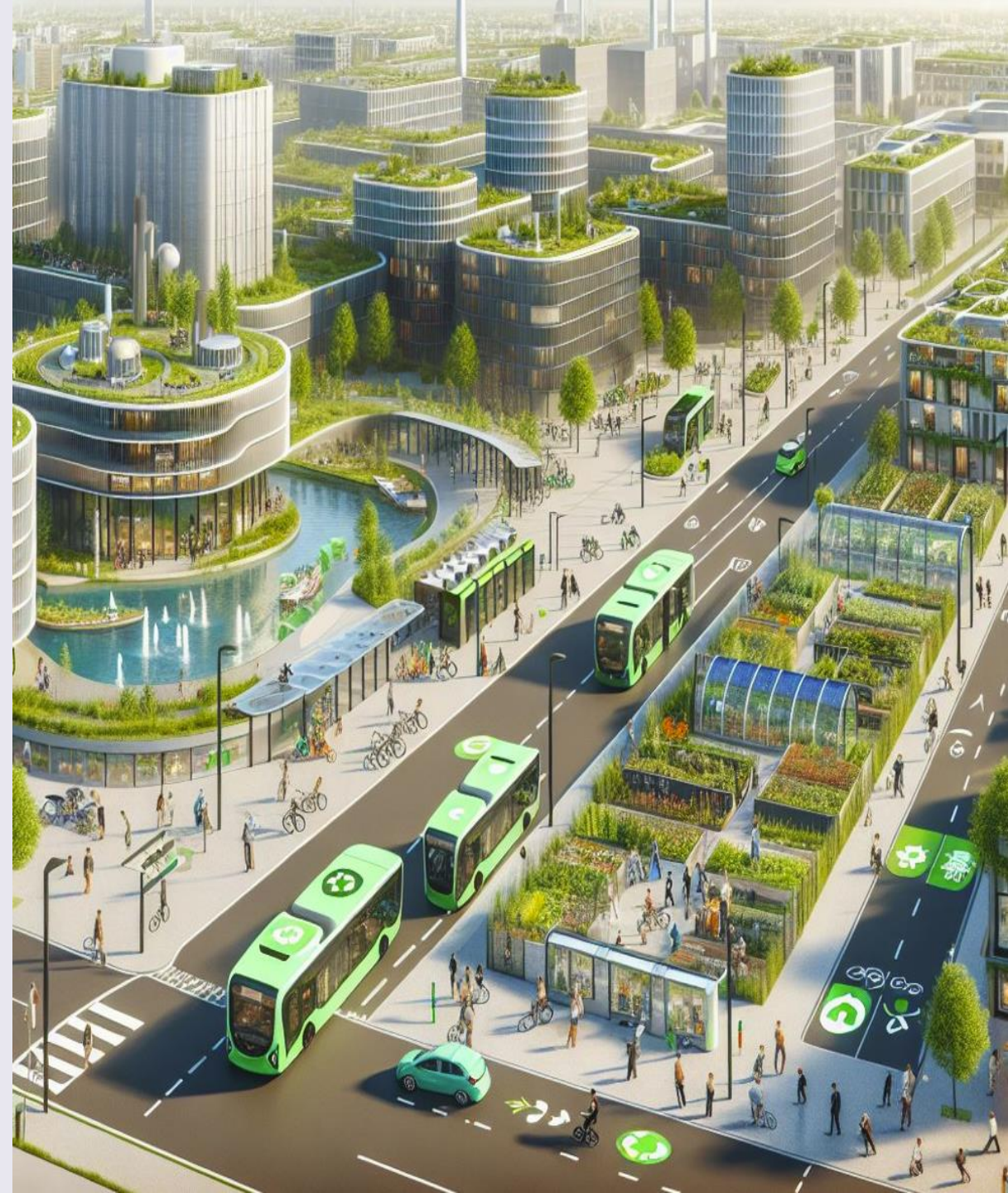
- Multi-modal mobility
- Active mobility such as walking and cycling

Consumer goods

- Which are shared, repaired, reused and remanufactured

Food systems

- Local growing communities
- Shorter supply chains
- Refill systems in retail
- Micro anaerobic digestors for food waste



Our Circular Economy Services

Policy Evaluation & Impact Assessment

System Costs and
Benefits Assessment

Extended Producer
Responsibility Design &
Evaluation

Recycled Content
Considerations and
Modelling

Deposit Return System
Design & Cost Benefit

Supply Chain Assessments &
Sourcing Strategy

Circular Economy Strategies/ Road Maps &
Business Models

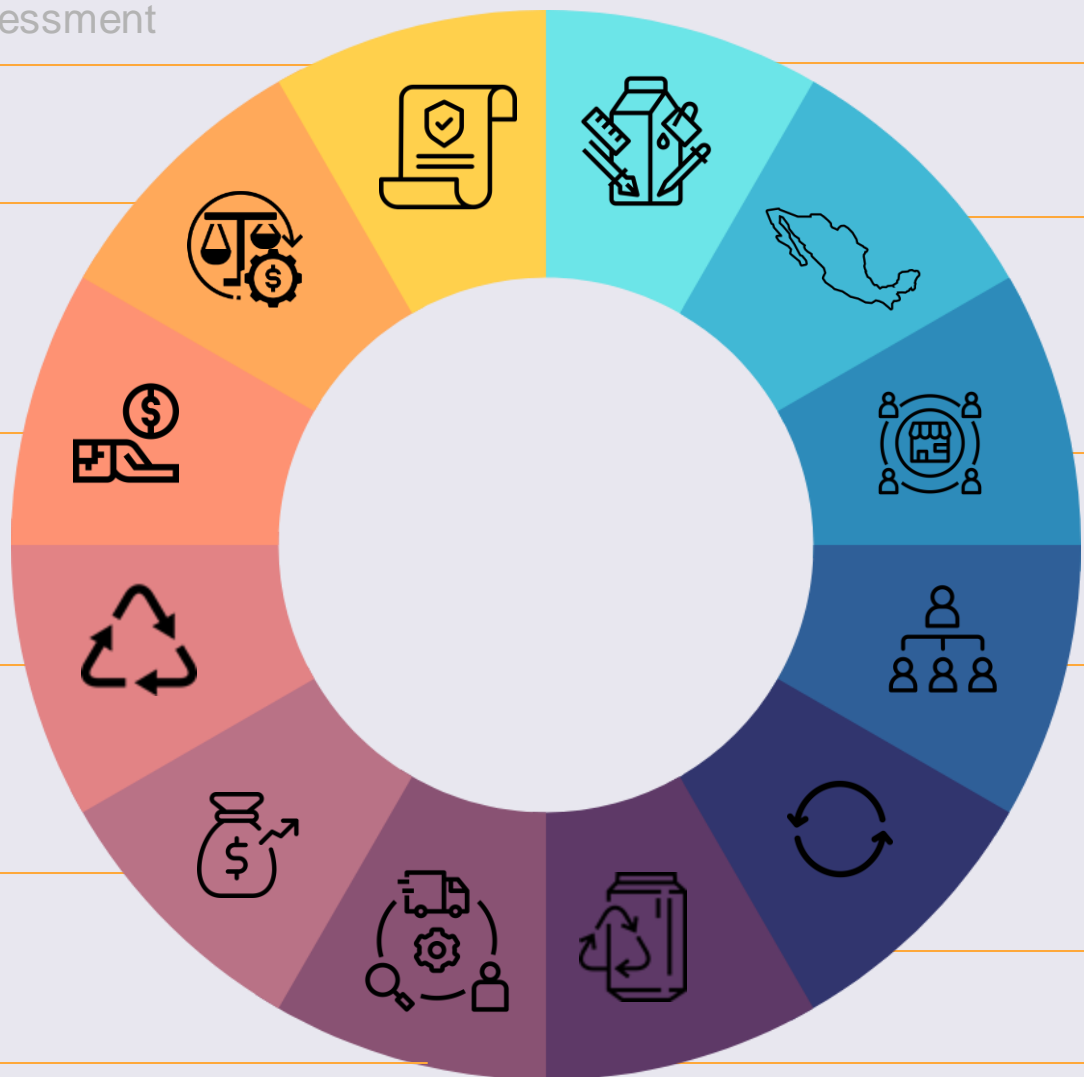
National & Regional Recycling
Needs Assessments

Market Assessments &
Pricing Strategy

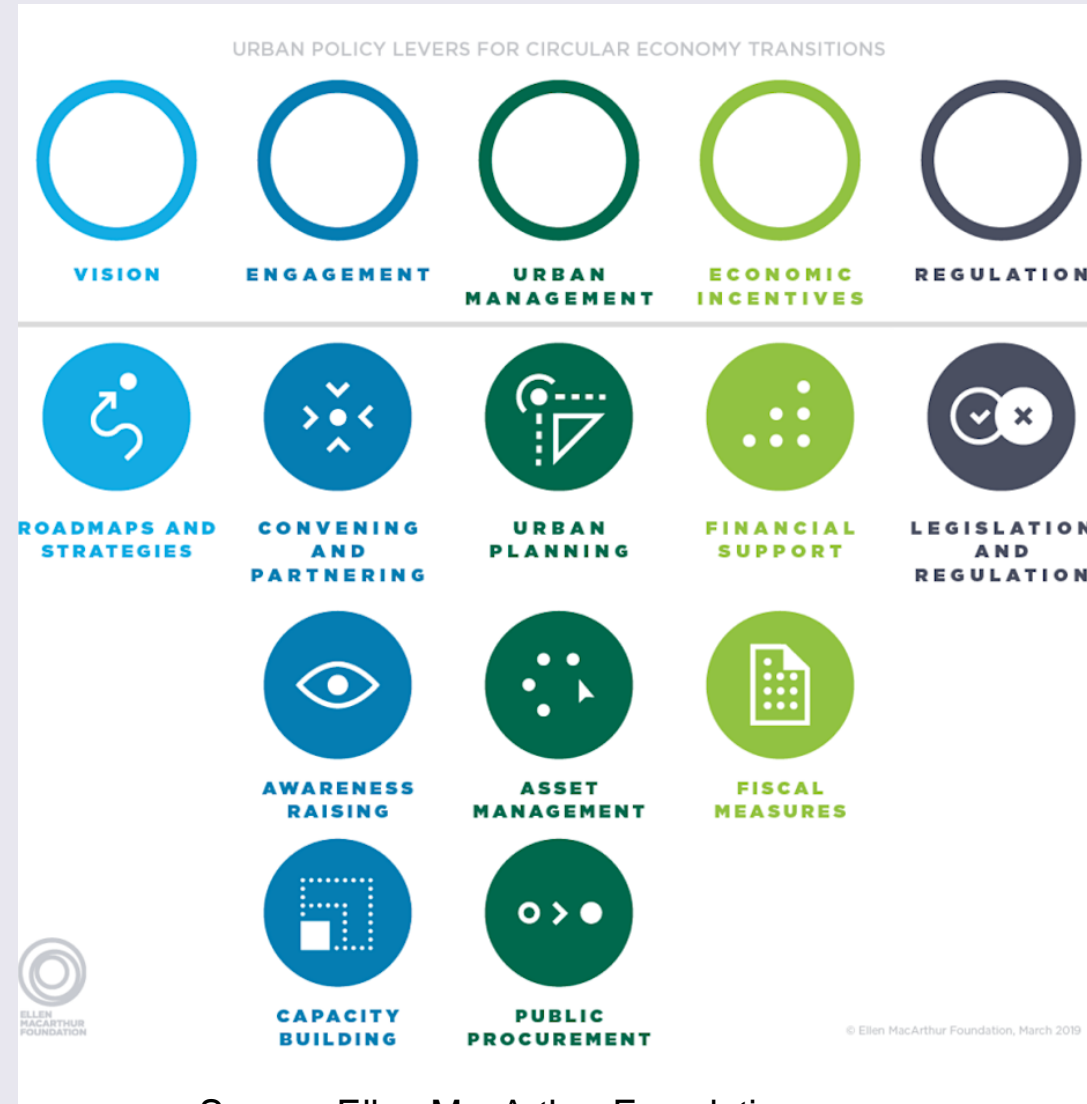
PRO design and support
(e.g. service procurement)

Reuse System Modeling and
Feasibility

Recyclability Assessments



Circular Economy Levers in Cities: Policy Levers



Source: Ellen MacArthur Foundation

Circular Economy Routemaps and Strategy for Public Sector

Sets out a **vision** for a more circular economy at local level

Sector priorities to support the transition – built environment, food systems, transport and logistics, plastics, textiles

Cross cutting themes to create the right conditions to accelerate the circular economy

Policy measures and levers to enable the transition

Actions over the short, medium and longer term to make progress

Stakeholders and partnerships to help accelerate the transformation

Identifying co-benefits including carbon reduction, job creation, waste reduction



Refill and Reuse Solutions: Pioneering Sustainable Packaging

Established in 2020 and backed by UKRI, the Refill Coalition comprises **Ocado Retail**, **Aldi UK**, and supply chain solutions provider **CHEP**

Convened by **GoUnpackaged**, a leading expert in refill and reuse, the coalition aimed to develop practical, scalable solutions to tackle the plastic waste crisis

Eunomia acting as independent LCA specialist to evaluate the pilot

Early findings from Eunomia suggest that both **refill models offer substantial environmental benefits when scaled**, reinforcing their potential as long-term alternatives to single-use plastics



Grassroot Circular Economy Capacity Building

Supported by a **Carmarthenshire Circular Economy Action Plan** developed by Eunomia to **build local capacity** for community led projects, focused on:

- Share
- Reuse and repair
- Food surplus redistribution

Funding secured by Carmarthenshire Council via the UK Government's Shared Prosperity Fund

Eligible projects including:

- Library of Things
- Repair Cafes
- Community composting facilities/infrastructure
- Textile reuse/repair projects
- Plastic recovery projects



Funded by
UK Government
Wedi ei ariannu gan
Llywodraeth y DU

Circular Economy Fund

Guidance notes



POWERED BY
**LEVELLING
UP**

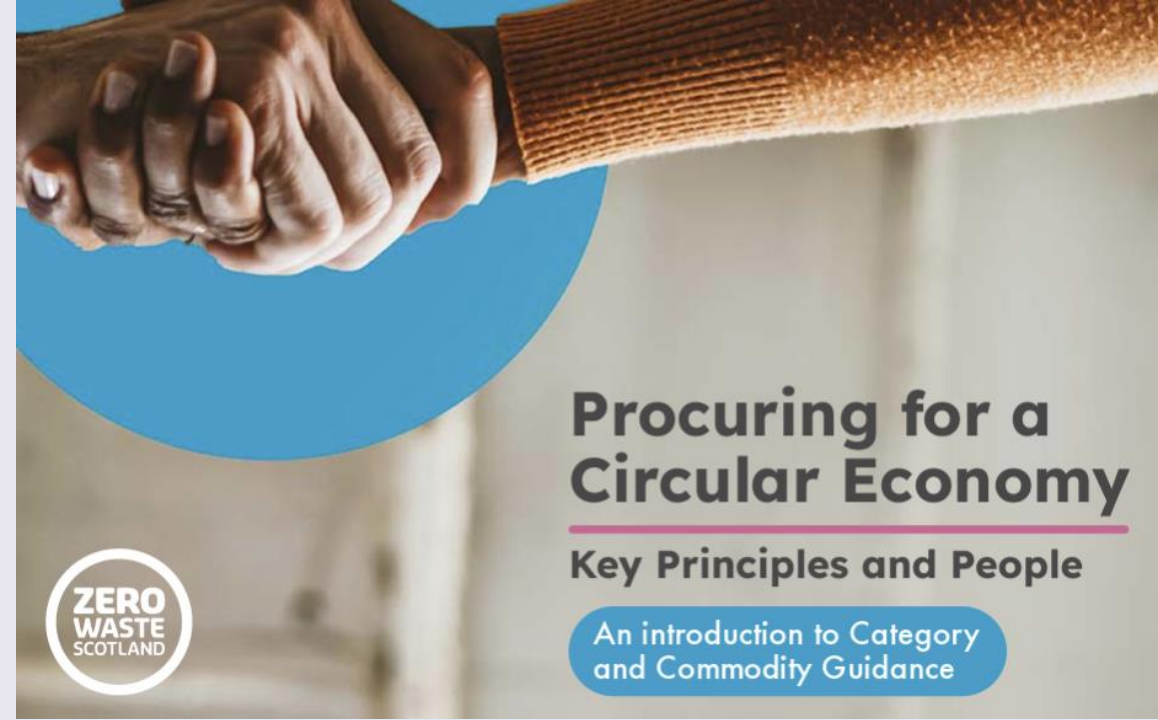
WEDI'I YSBU GAN
**FFYNIANT
BRO**

Procuring for a Circular Economy

- **Category guidance** for low carbon circular procurement
- **Common areas of public sector spend** – construction, ICT, furniture, catering, workwear etc
- **Supports reduction in scope 3 emissions** linked to commissioning and procurement

Key principles:

- **Buy less** – can you avoid procurement?
- **Buy better** – buy remanufactured, lease or rent equipment, specify recycled or low carbon products
- **Use better and longer** – extended warranties, explore take-back arrangements



Low Carbon & Resource Efficient Construction Procurement

Model procurement wording for public and private sector clients and contractors



Further reading

[WRAP Circular Procurement Hierarchy](#) (Eunomia, 2021)

[WRAP Low Carbon Resource Efficient Procurement Guide](#) (Eunomia, 2022)

[WRAP Sustainable Procurement Market Engagement Guide](#) (Eunomia, 2022)

[Zero Waste Scotland Circular Economy Procurement Guidance](#) (SPL/Eunomia 2023)

[WRAP Introduction to Whole Life Costing](#) (Eunomia, 2023)

[WRAP Public Sector Plastics Guidance](#) (Eunomia, 2020)

[Routemap for a Circular London](#)



Alex Forrest
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Thank You



About Eunomia

Eunomia is an independent sustainability consultancy driven by a genuine passion to make a positive change to the clients we work with and the communities they operate in. Founded in 2001, we have been pioneers in the sector - early advocates for helping NGOs as well as leading public and private sector organisations in the UK and overseas to adapt their approach and adopt more sustainable processes.

Our consultants are experts in the field, deeply immersed in the subject with the technical knowledge and skill to offer clients innovative, clear and practical recommendations. We are committed to finding solutions to better protect the planet, while supporting the wider aims and needs of our clients.

Each client is treated as an individual, with consultants taking the time to understand their objectives and how best we can support them. This personal service ensures a strong relationship is forged, based on honest and regular communication. It also ensures if these objectives change, there is the flexibility to adapt.

As an established leading independent consultancy, clients can have complete confidence that consultants will offer evidence-led solutions based on robust, impartial thinking that offer both pragmatic and positive outcomes.

Consumption and the Circular Economy

Prof. David Greenfield FCIWM, FRSA, CEnv

Founder and Managing Director – SOENECS

Co-founder and Managing Director – Tech-Takeback

Executive Chair and Co-founder – etsaW Ventures

Circular Economy Taskforce member

Vice President – Circular Economy Club

Senior Vice President – CIWM

RAEng Visiting Professor of Circular Economy – University of Brighton





SOCIAL, ENVIRONMENTAL & ECONOMIC SOLUTIONS (SOENECS) Ltd is an award winning, independent research and innovation practice set up in June 2014, supporting public and private sectors deliver circular economy.

The team have local government background at Director level and have led procurements and partnerships at a national level.

SOENECS specialise in the fields of Circular Economy Routemap, Circular Economy Opportunity Assessments, LCA assessments, waste and resource management research and advice, data modelling, and partnership delivery.

www.soenecs.co.uk @DrResources @SOENECS





A Lot Can Happen in 20 Minutes

(with thanks to Sophie Thomas of etsaW for the inspiration)

A yellow dump truck is shown from a low angle, positioned on a dirt path in a mining environment. The truck's bed is raised, dumping a load of dark, rocky material. In the background, there are large, conical piles of similar material and a tall metal structure. The scene is hazy with dust or mist. The image is decorated with several semi-transparent colored circles in the corners: pink, purple, red, and orange.

Extraction

Approximately **3.7 million tonnes** of materials are extracted globally

99,000 tonnes of iron ore

850 tonnes of copper

2,600 tonnes of aluminum ore

4.9 tonnes of lithium

An aerial, high-angle photograph of a large parking lot filled with hundreds of cars parked in neat, diagonal rows. The cars are of various colors, including blue, red, white, and grey. The perspective creates a strong sense of depth and repetition. Several semi-transparent pink circles of different sizes are overlaid on the image: a large one on the left, a medium one in the top right, and a small one in the bottom right. The word "Production" is written in white, bold, sans-serif font in the upper left area.

Production

2,120 cars are produced and join
the 1.8 billion already on the world's roads.



Global Consumption

857,000 pairs of shoes purchased
52,000 mobile phones sold
20 million bottles of water consumed



Logistics

Truck journeys: ~834,000

Air freight journeys: ~140

Maritime journeys: ~100

Rail freight journeys: ~2,760

837,000 logistics journeys
worldwide

Energy

We use 11.4 PJ of electricity

4 million average UK homes for a day.

It's also roughly 3.1 terawatt-hours (TWh), enough to power 1.5 million electric cars for a full charge.





Water

We consume 139 million cubic meters

Equivalent to 55,000 Olympic-sized swimming pools.

This is enough water to supply over 1.4 billion people with daily drinking water



Waste Generation

Over 90% of extracted materials ultimately go to waste.

71 tonnes of clothing discarded

2,030 tonnes of electronic waste generated

40,000 tonnes Food waste



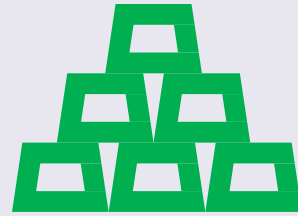
Circular Economy Taskforce

UK Rationale for change



Protecting our environment and sustainability

- slow down the use of natural resources,
- reduce landscape and habitat disruption and
- help to limit biodiversity loss.
- key part of the UK's move to decarbonization and net zero.



Reduce raw material dependence and improve resilience

- Supply of crucial raw materials globally is limited.
- The UK currently imports 80% of our raw material inputs, leaving us vulnerable to future global resource depletion and supply shocks.
- More circularity reduces our reliance on raw material imports.



Boosting economic growth

- A Circular Economy could deliver economic growth through increasing the UK's productivity.
- More efficient use of resources could save businesses money increasing their competitiveness.
 - Redesigning products and processes to be more circular boosts innovation and investment.

There are many other potential benefits of moving from a linear to a circular economy, such as reducing waste crime and littering, or easing the cost of living through saving consumers money.

Delivering the Circular Economy Transition



- Delivering a Circular Economy is a **key contribution to the government's growth mission**,
- harnessing **investment into new business models** and **infrastructure** across the UK.
- UK Government and an expert taskforce are developing a **Circular Economy Strategy**, which will set out the following:
 - the vision for the circular economy;
 - potential new targets to galvanise action at all levels of government;
 - a series of economy-wide enablers to drive investment into circular business models and critical infrastructure, stimulate behaviour change, and encourage innovation;
 - a new approach based on collaborative delivery partnerships with local places, academia, industry, investors and civil society; and
 - A series of **sector-based roadmaps** that set out long-term pathways to regulatory reform, investment opportunities, sector support and behaviour change interventions.
- The Circular Economy Strategy will be England only in scope

4

How we will deliver the Circular Economy Transition

A Circular Economy Taskforce to develop the strategy, comprising representatives from industry, academia, civil society and the civil service.



The Taskforce was convened for the first time in November and has since met multiple times to establish its initial areas of interest.



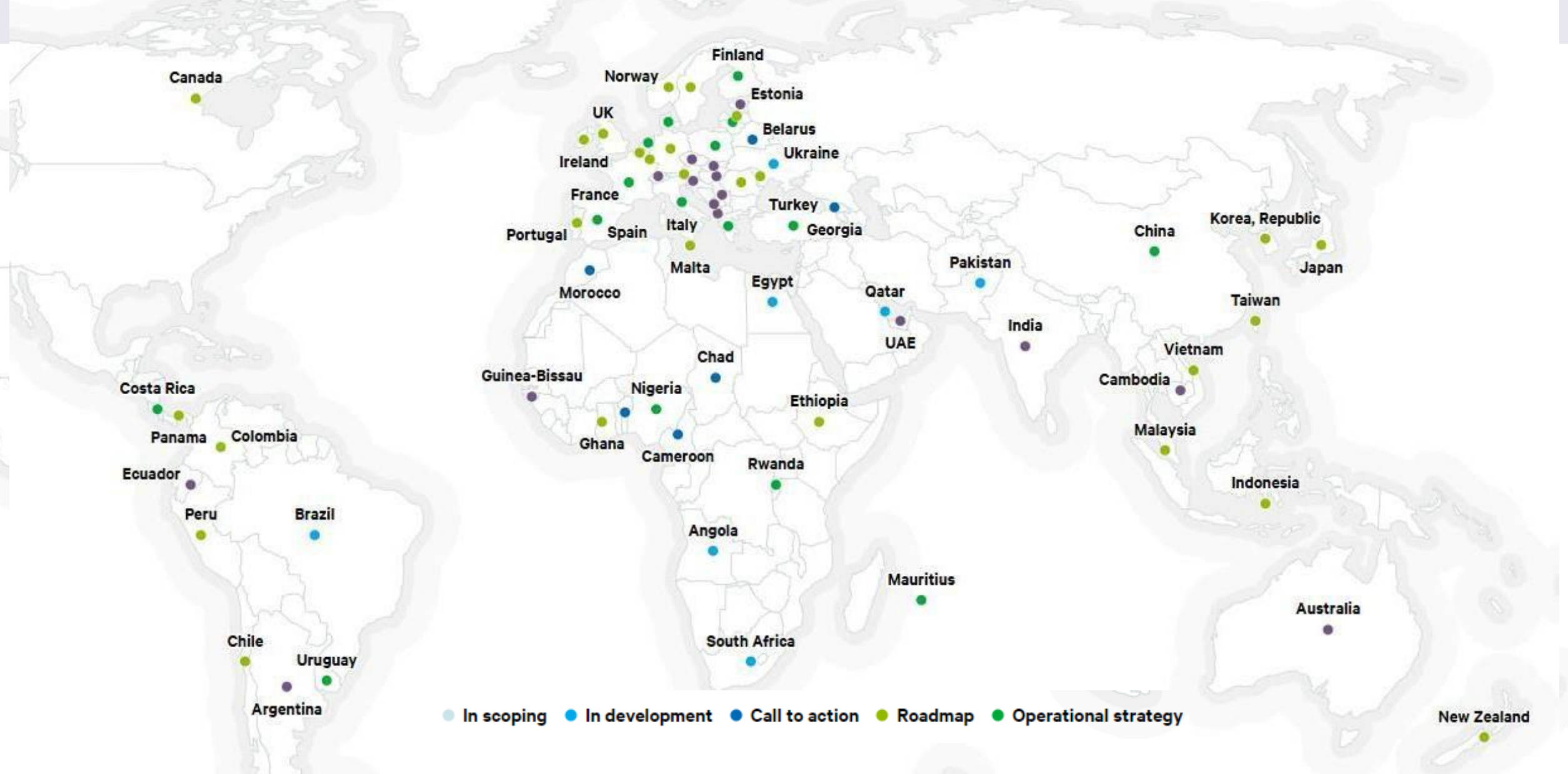
The sector-based roadmaps work will be overseen by a **Small Ministerial Group on Circular Economy**, comprising the Secretaries of State for Defra, the Department for Energy Security and Net Zero (DESNZ), the Department of Business and Trade (DBT), and the Department for Transport (DfT); the Deputy Prime Minister (MHCLG) and the Chancellor of the Exchequer.

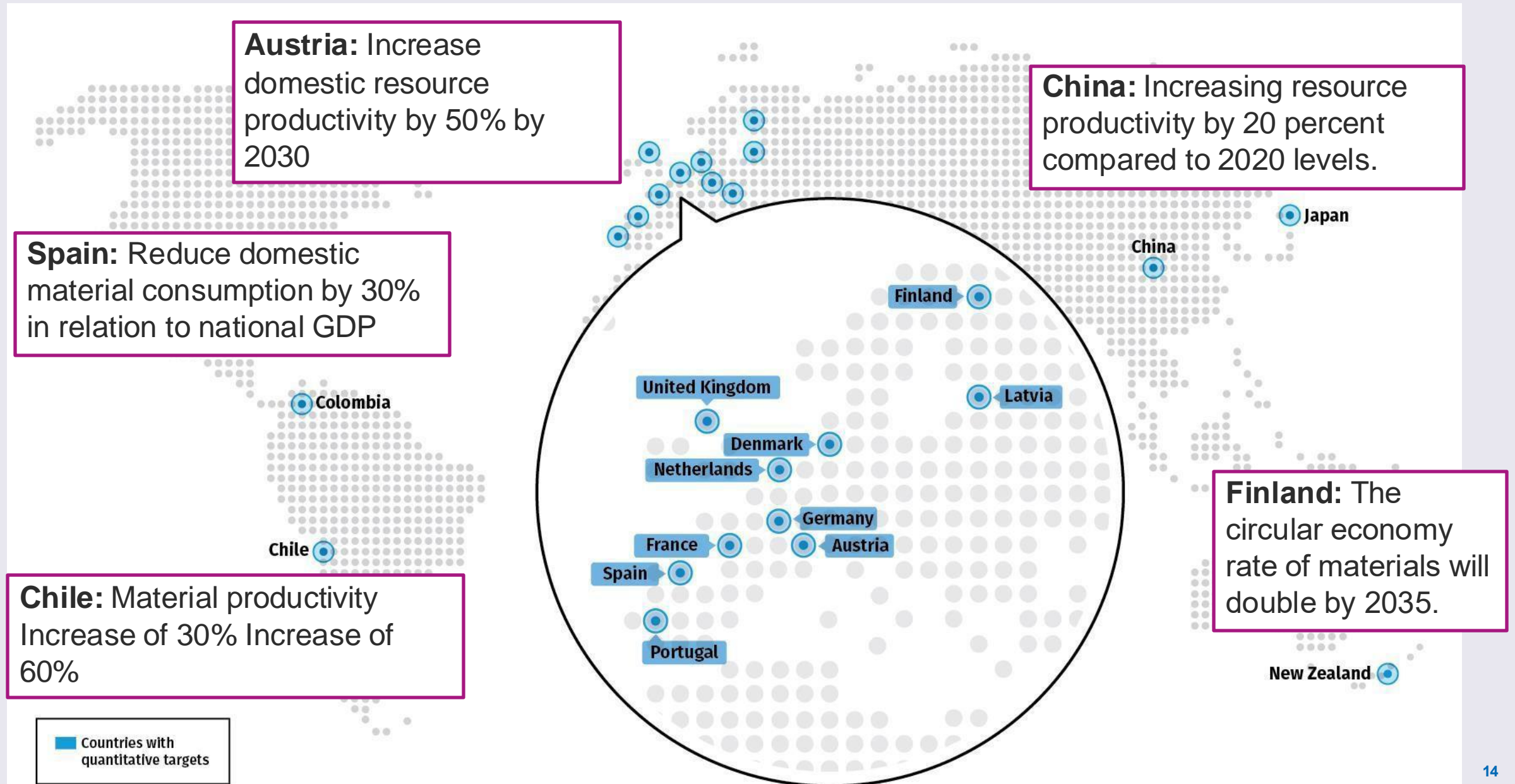


Local delivery of circular economy principles is something Defra SoS – a former Council leader – is passionate about. We are engaging with potential “**pathfinders**” – high-ambition local, regional, and combined authorities that are already developing and/or delivering circular economy initiatives at a local level. Working with MHCLG, we have received dozens of expressions of interest from relevant organisations and the team have been engaging accordingly.

2025

Map of circular economy roadmaps and strategies





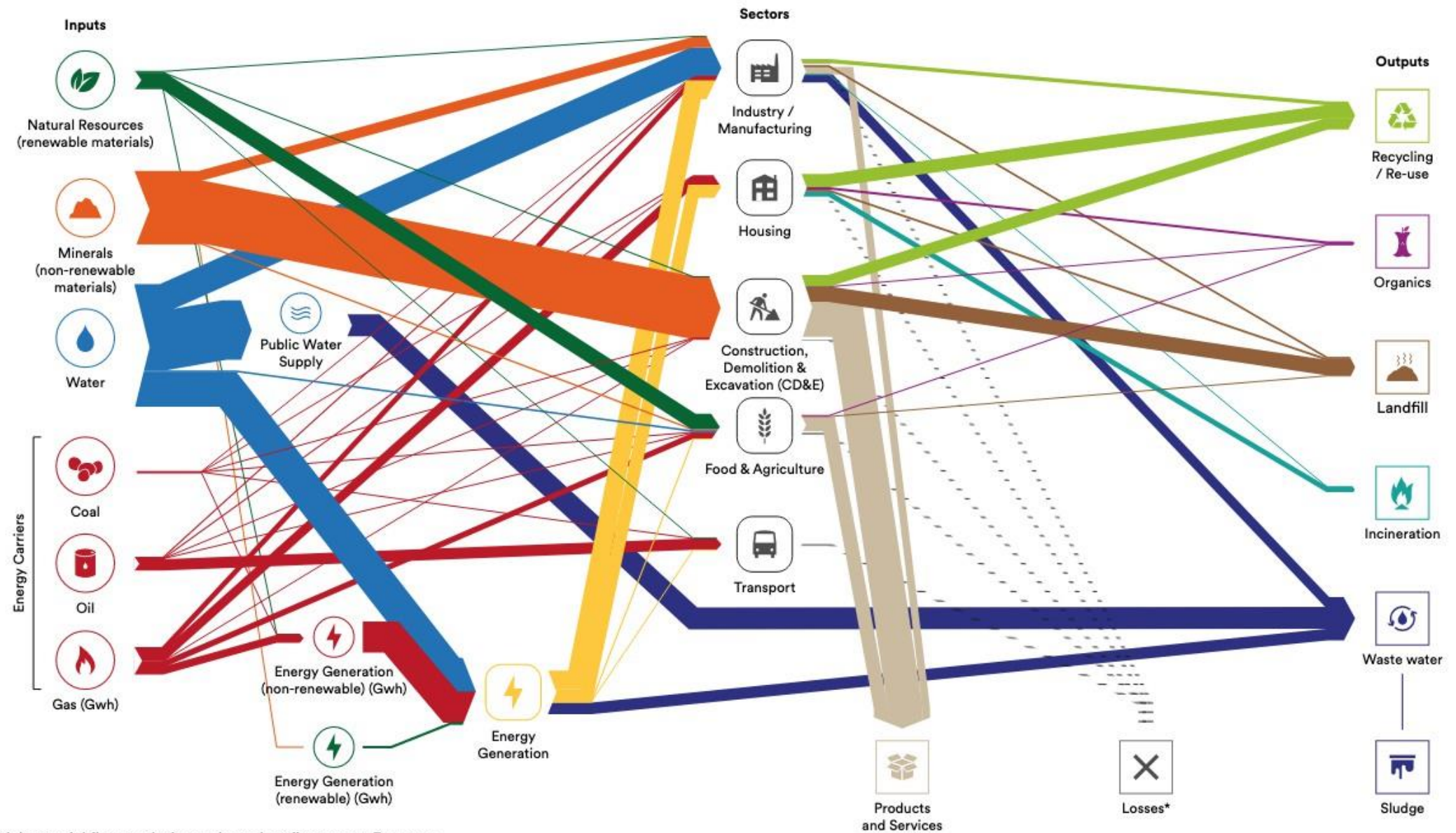


Figure 4: Initial material flow analysis conducted on five sector. For more information see Supporting Document: Baseline Analysis.

*Note: Insufficient data is available for losses, so an indicative flow has been represented by a hashed fill.

Circular activities

A combination of engagement and desk-based research was done to map the scale of the existing current circular economy in Greater Lincolnshire and Rutland. This began with a short questionnaire which asked businesses and research organisations to identify what type of circular activity or circular business model they were using and was supplemented with desk-based research.

The pins on the map represent existing circular activity across two categories: research institutions and early business adopters. The locations of each organisation are not exact, and the map is for visual representation purposes only.

Businesses with Circular Models or Activities

- | | | |
|--------------------------------------|--|------------------------------|
| 1. Naylor Nutrition | 23. Micronclean Ltd | 45. Hilton Seafood |
| 2. Branstons Ltd | 24. Dynex Semiconductor | 46. Samskip UK |
| 3. Fairman Knight and Sons UK Ltd | 25. Forage & Fill | 47. DFDS UK |
| 4. Bridge Farm | 26. Smartfert Ltd | 48. Bakkavor |
| 5. Reverse Coal, the Lapwing Estate | 27. Reuseabox | 49. Moy Park |
| 6. PPS Group | 28. Alltech | 50. Rockscape Energy Ltd |
| 7. Pelagia | 29. Annabel & Co Property Staging | 51. Omni-Pac Group |
| 8. Three Oceans | 30. BioteCH4 | 52. Carbon Focus Engineering |
| 9. CorrBoard | 31. Viking Signs Ltd | |
| 10. British Steel | 32. Pentangle Engineering Services Ltd | |
| 11. Clean Tech | 33. Lincoln Eco Pantry | |
| 12. Coveris | 34. Dyson Farming | |
| 13. Lindum Group | 35. Lincolnshire Cloth Nappy Library | |
| 14. Overhall Contractors | 36. Manor Fresh Ltd | |
| 15. Baysgarth School | 37. Ramco UK | |
| 16. The Dancing Tiger Scrapstore CIC | 38. Recurring Life | |
| 17. Yesway Communications | 39. Autocraft Solutions Ltd | |
| 18. Hildreds Shopping Centre | 40. Filcom UK | |
| 19. Stokes Tea and Coffee | 41. Tri-Pack | |
| 20. Destination Lincolnshire | 42. Lenzing | |
| 21. APk Industries | 43. ProAmPac | |
| 22. Returnal | 44. 2 Sister Food Group | |

Research Institutions

1. National Centre for Food Manufacturing (NCFM)
2. Lincoln Institute for Agri-Food Technology (LIAT)
3. Offshore Renewable Energy Catapult (ORE)
4. The Bridge Advanced Engineering R&D Centre



2020 BRIGHTON & HOVE CITY COUNCIL ROUTEMAP & ACTION PLAN 2022

Circular construction and maintenance

As a constructor of buildings and roads, the public sector can specify circular materials, designs and methods of construction and maintenance for new and existing developments

Buildings

The following actions will be introduced to deliver a circular city:

2022

- 24.** Pilot reclamation audits and deconstruction of existing buildings for new build housing projects, using reclaimed materials on site wherever possible.
- 25.** Separate construction waste streams from housing maintenance projects at the council's Housing Centre.
- 26.** From 2022 undertake a Circular Economy opportunities assessment and evaluation of all new build housing construction projects.
- 27.** Set outcomes for all new build housing projects using the RIBA Climate Challenge 2030 Targets and Checklist (subject to Housing Committee agreement in September 2022).
- 28.** From 2022 undertake a whole life carbon assessment process on all new build housing projects.

2023

- 29.** Undertake research and feasibility for implementing materials passports on new building housing construction projects and develop a strategy for implementation.

2025

- 30.** By 2025 specify in project briefs at least 50% of all materials used in a new development are recoverable at the end of life of the building on all new build housing projects.

2030

- 31.** By 2030 specify in project briefs at least 60% of all materials used in a new development are recoverable at the end of life of the building on all new build housing projects.

Brighton & Hove Circular Economy Routemap

A sustainable green growth strategy for the city
2020-2035

Economy, Environment & Culture
Supporting economic growth and maintaining an attractive, connected and well run city for residents, businesses and visitors

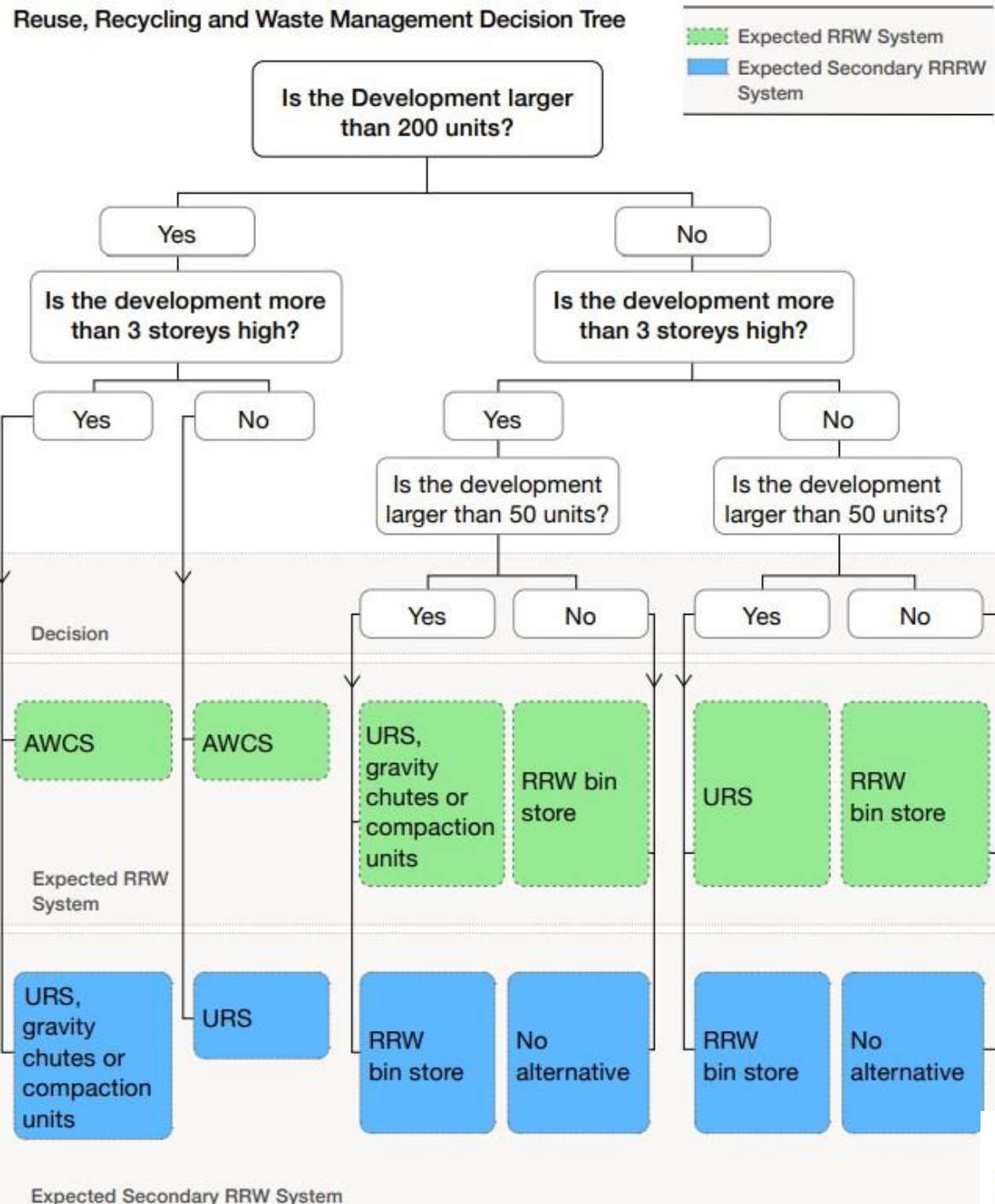


Brighton & Hove Circular Economy Action Plan

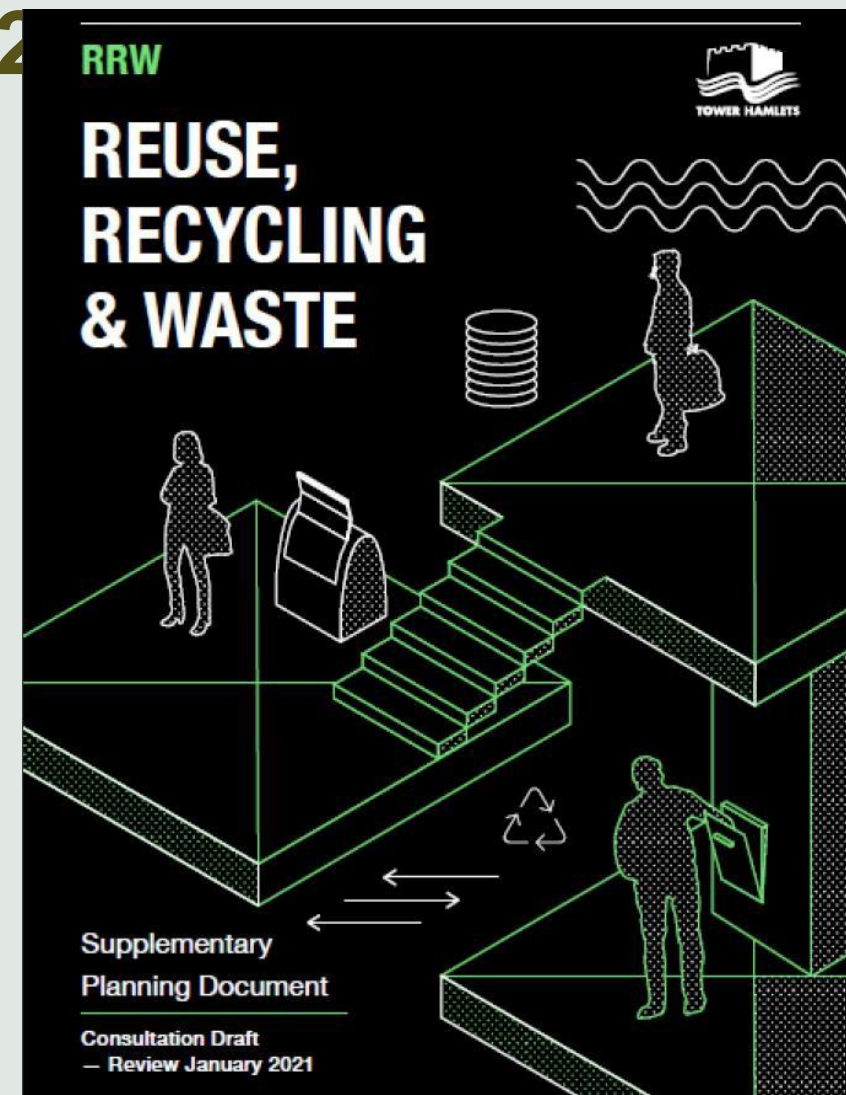
A sustainable green growth strategy for the city
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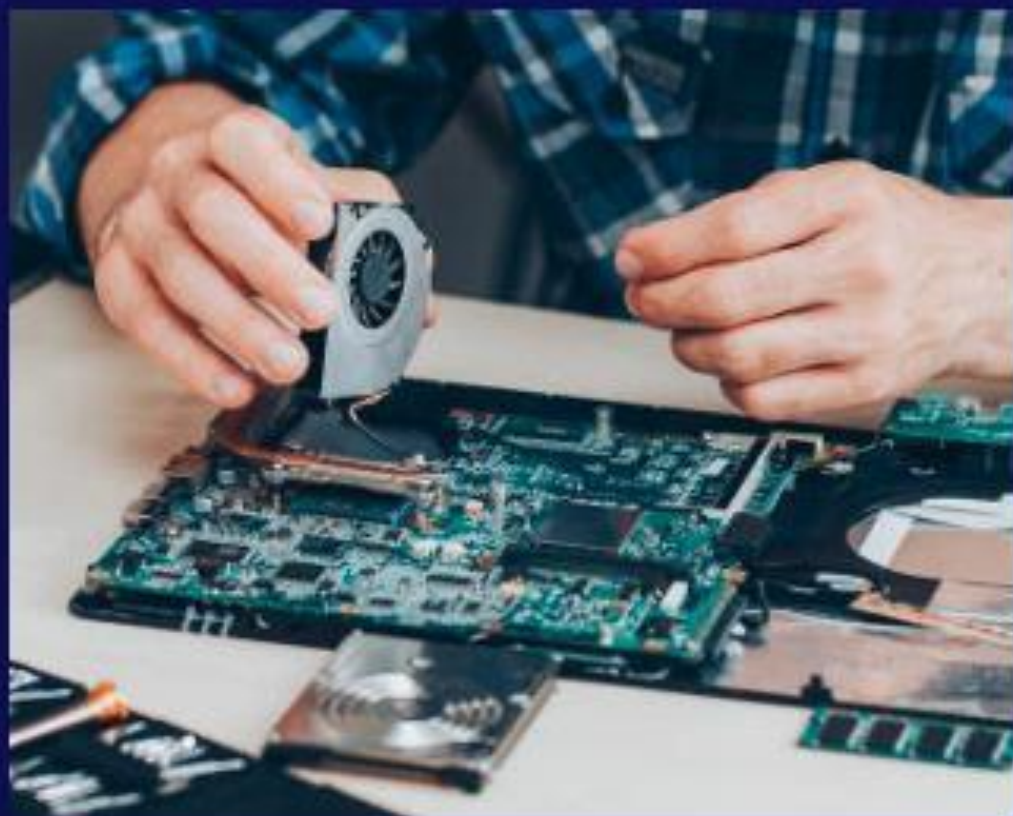


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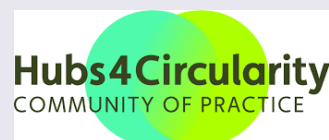
SPD

Circular solutions for unwanted IT



We are linked to a global network of Hubs 4 Circularity with the same mission:

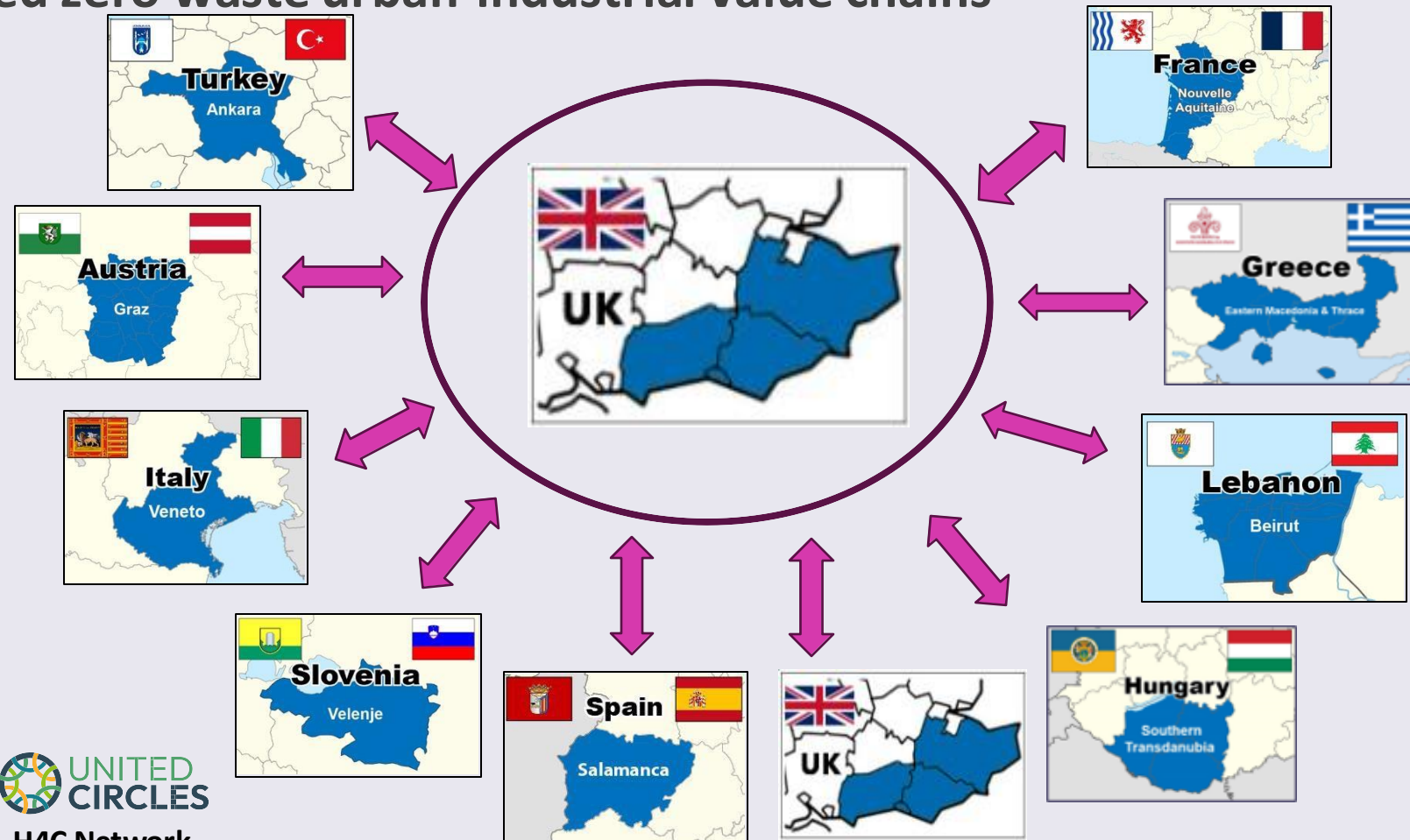
To deploy decarbonised zero waste urban-industrial value chains



H4C Network



H4C Network



The background is a dark teal color with a repeating pattern of speech bubbles in various colors (red, yellow, purple, grey) containing a large white question mark. There are also several small, solid-colored circles (pink, orange, yellow) scattered across the background.

Q&A
Thank you for your
attention. Any questions?