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Evaluating progress towards a circular economy – where do we start?

Callum Blackburn
Head of Policy and Research

zerowastescotland.org.uk

[@zerowastescot](https://twitter.com/zerowastescot)

Themes and goals



Improving recycling
performance



Accelerating a
circular economy

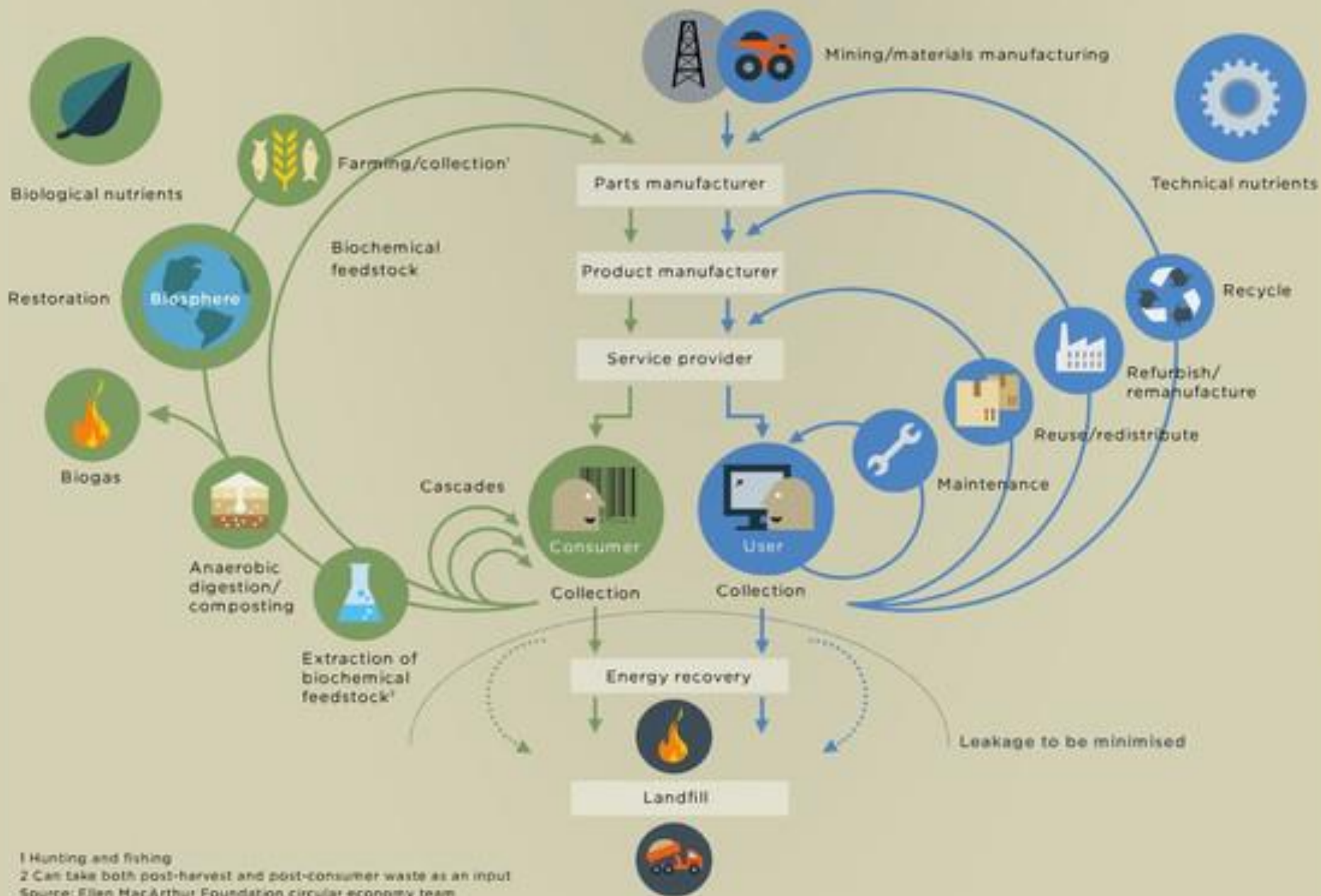


Encourage
resource efficiency



Reducing litter and
fly tipping

The circular economy—an industrial system that is restorative by design



¹ Hunting and fishing

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

Source: Ellen MacArthur Foundation circular economy team



Launching the Consultation on Scotland's CE Strategy

Circular Economy Strategy – *Making Things Last – the Key Priorities*

- **Food and drink:** a more “circular” approach to the beer, whisky and fish sectors could lead to potential savings of **£0.5bn per year**.
- **Energy infrastructure:** opportunities from reuse of equipment from wind turbines and decommissioned oil and gas platforms.
- **Construction and buildings:** construction accounts for about 50% of all waste in Scotland.
- **Remanufacturing:** already worth **£1.1 billion** to economy, and potential to create an additional **£620 million** turnover and **5,700 new jobs by 2020**.

Circular Economy Strategy – *Making Things Last*

Delivered by a wide range of initiatives:

- Food Waste Reduction target of 33% by 2025
- **Supporting new Business Models / Circular Design**
- Skills development
- Public Procurement
- Producer Responsibility



Hire & Leasing

Long-term hire or leasing of products as an alternative to purchasing.



Performance/Service System

Providing a service based on delivering the performance outputs of a product where the manufacturer retains ownership, has greater control over the production of a product, and therefore has more interest in producing a product that lasts.



Incentivised Return

Offering a financial incentive for the return of 'used' products. Products can be refurbished and re-sold.



Asset Management

Maximising product lifetime and minimising new purchase through tracking your assets, planning what can be re-used, repaired or redeployed at a different site.



Collaborative Consumption

Rental or sharing of products between members of the public or businesses, known as "peer-to-peer".



Long Life

Products designed for long life, supported by guarantees and trusted repair services.

Example – Kalopsia

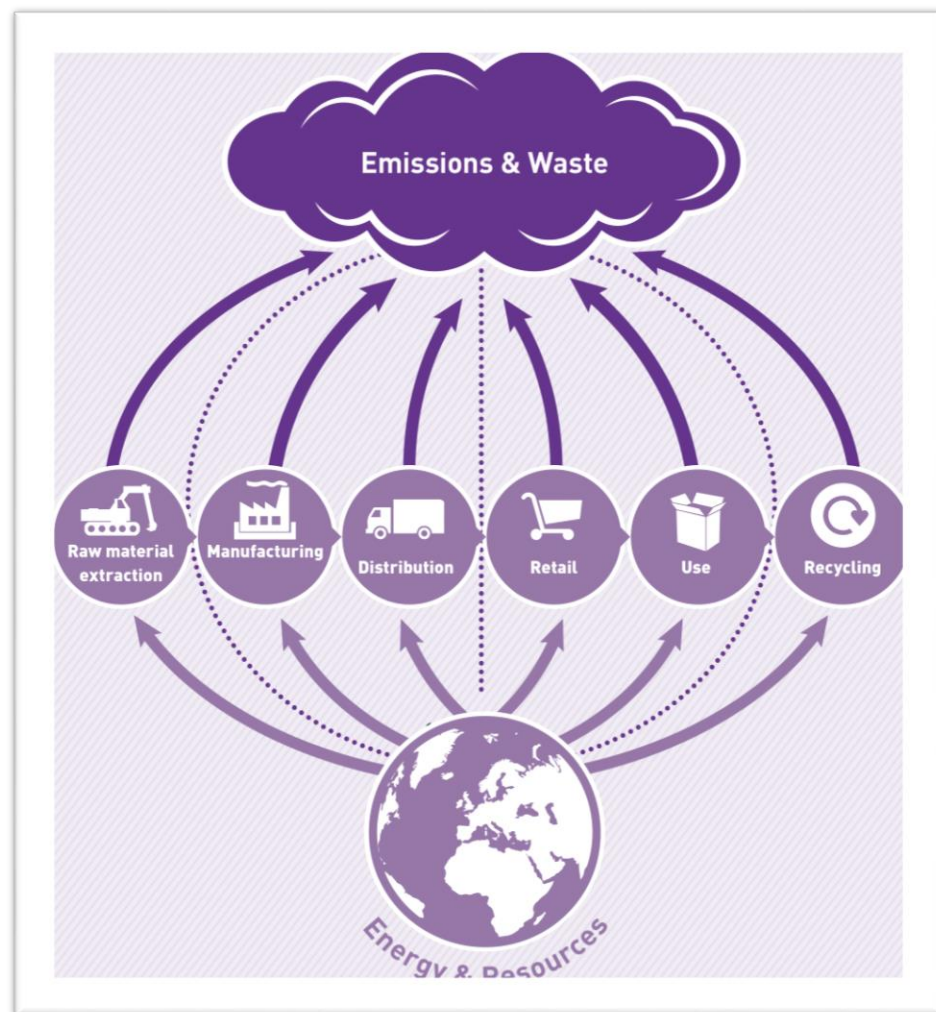


Measuring circularity

- Current focus is on evaluation using weight based “Waste” measures
- Some initiatives to improve on that:
 - Improve quality of current measures
 - Scotland’s Carbon Metric
 - Development of Food Waste measures

Waste and carbon emissions

- Scotland's carbon metric (consumption v territorial)
- Identifies optimal solutions (carbon based) to global issues of resource consumption
- Basis for report on Carbon Impacts assessment of CE.





SAVING THE WORLD ISN'T JUST FOR THE MOVIES

RECYCLE FOOD WASTE AND HELP SCOTLAND FIGHT CLIMATE CHANGE

LET'S GO GREENER TOGETHER
GREENERSOTLAND.ORG



Scottish food waste prevention target

- In part measured via national waste data and sector studies
- Improving evidence and significant data gaps present measurement challenges (e.g. liquids, on-farm losses)
- Justification for extending legislation and monitoring?



Measuring circularity – the future

- Define where our policies are designed to act (on a State? Sector? Supply Chain?)
- Will measuring carbon be the key environmental indicator?
- Other measures matter when defining success of CE policy (Jobs? Resilience?)

Measuring Circularity

Micro Level (from EMF Circularity Indicators 2015)

- Input in the production process: virgin versus recycled
- Utility during use phase: how long & intensely is the product used
- Destination after use: landfill, recovery, recycling
- Efficiency of recycling: waste hierarchy

Measuring Circularity

Macro Level

- The financial value added of economic activity can be measured but externalities are largely missing
- Carbon, health, skills & training, voluntary labour, over-crowding....
- Missing circular economy measures – material flows & resource depletion, resilience, collaborations....

What does policy success look like?

- At the individual business level?
- At national policy-level?
- So in the short-term how can we tell if policies are working?
- Measuring the CE “journey” maybe more in line with the appraisal of economic development in the long term?
- We have begun the journey but we are at the start!

Useful Links

- Scotland's Circular Economy Strategy - <http://www.gov.scot/Resource/0049/00494471.pdf>
- Beer Whisky Fish Study - <http://www.zerowastescotland.org.uk/BeerWhiskyFish>
- Remanufacturing Study- <http://www.zerowastescotland.org.uk/remanufacturingreport>
- Carbon Metric - <http://www.zerowastescotland.org.uk/our-work/carbon-metric>
- Carbon impacts of a Circular Economy - <http://www.zerowastescotland.org.uk/CarbonImpactsOfTheCircularEconomy>
- Business Regulatory Impact Assessment for CE Strategy - <http://www.gov.scot/Resource/0049/00494865.pdf>