



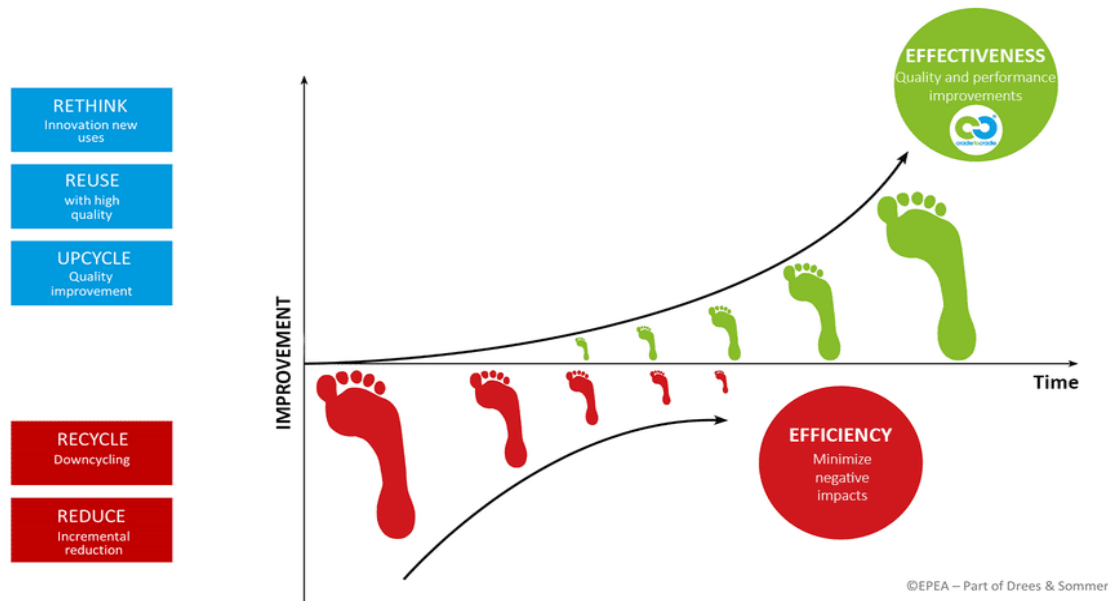
Issue for catalysing a council to achieve a Circular Economy

Dr Tim Walker

*Chief Executive (Acting)
arc21*



2. Waste as a System





Recycling V CE

- CE goes beyond recycling economy
- Recycling seeks to incrementally increase material efficiency
- CE calls for a systemic transformation
- CE incorporates multiple concepts

LINEAR ECONOMY



RECYCLING ECONOMY

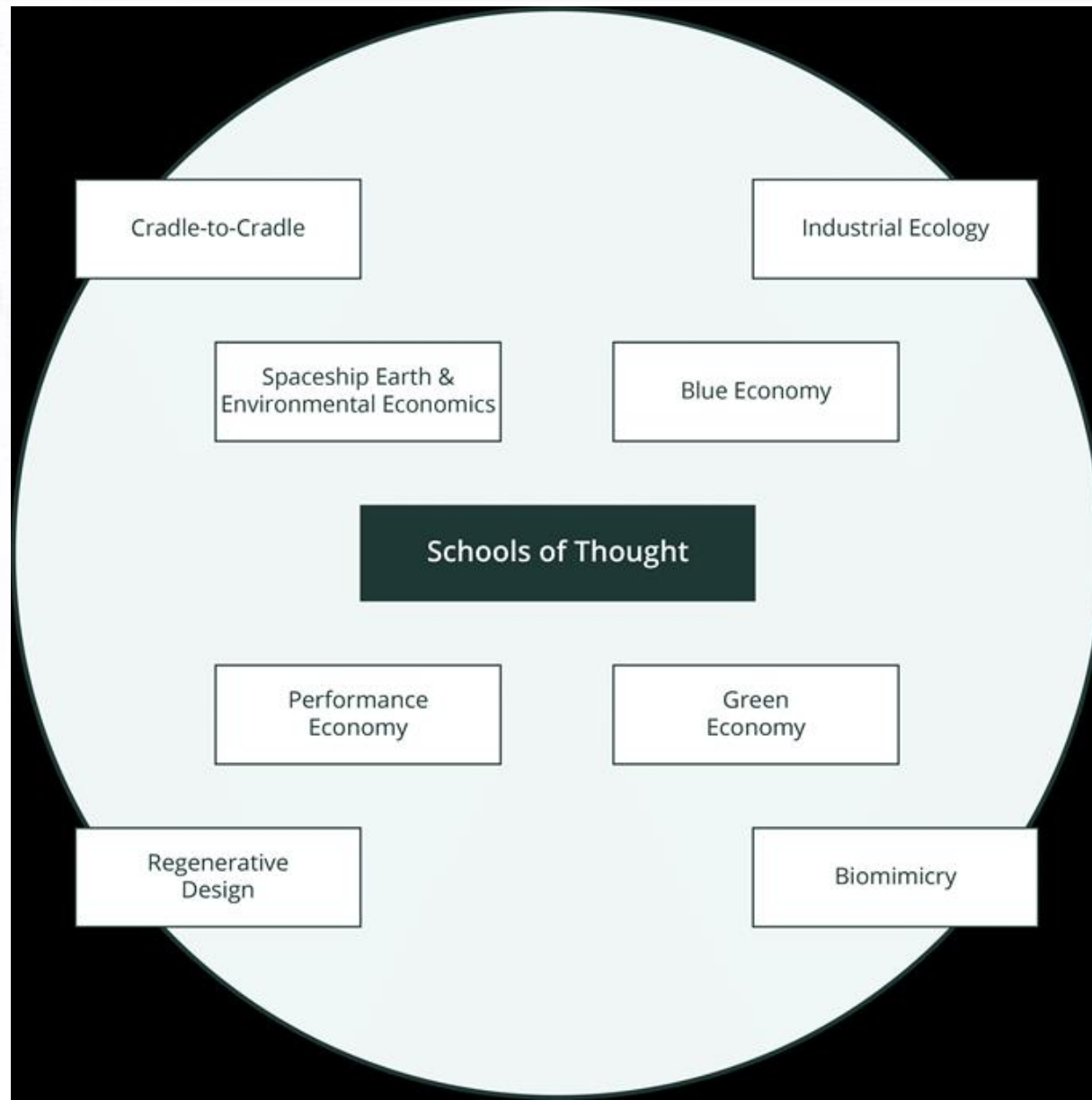


CIRCULAR ECONOMY





CE = route towards sustainability





CE & the UN 2030 Agenda

Circularity
is a way to achieve
**sustainable
consumption
and production**
and other interlinked
SDG goals





3. What is Design?

- Design is creation with intention
- Everything that surrounds us has been designed: clothes, buildings, the way we get our food. The [Montreal Design Declaration](#) defines design as “*the application of intent: the process through which we create the material, spatial, visual and experiential environments in a world made ever more malleable by advances in technology and materials, and increasingly vulnerable to the effects of unleashed global development.*”

PRODUCTS TO
SERVICES

PRODUCT LIFE
EXTENSION

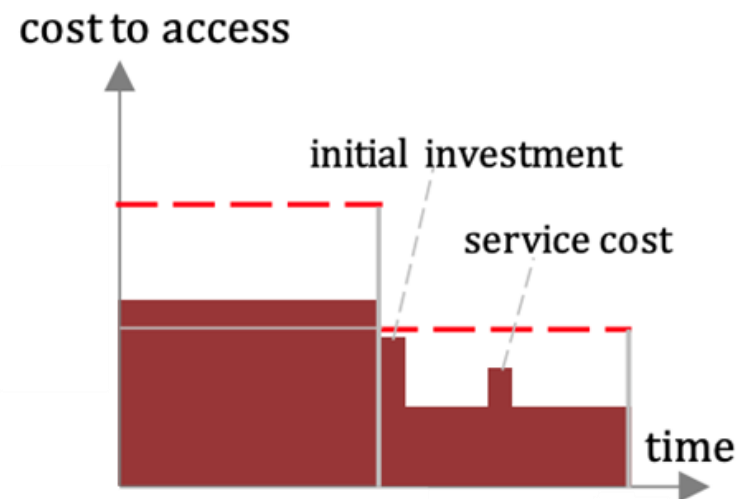
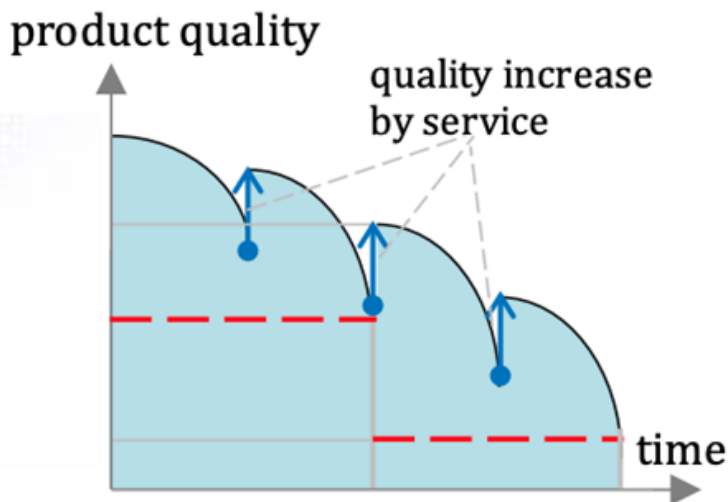
DEMATERIALISATION

MODULARITY –
upgradability &
easy repair



Toolkit for the Circular Designer

- Important for CE – Ellen MacArthur Foundation / IDEO created the [Circular Design Guide](#), a free resource
- Contains tools, methods, &c to help designers through stages of circular design
- Also a section outlining the journey and work of pioneering circular designers.





“Best way to predict the future is to create it” – P Drucker

Belfast will be a city...





Belfast Agenda priorities

Growing the economy

- Create employment and opportunity
- Attract investment into Belfast
- Foster business growth in Belfast
- Strengthen business relationships and make it easy to do business
- Maximise the impact of the city region
- Increase tourism spend
- Reduce economic inequalities

Living here

- Improve neighbourhoods
- Improve the city living experience
- Improve community relations
- Reduce life inequalities
- Enable active, healthy and empowered citizens
- Provide fit-for-purpose city services
- Support and care for people who face multiple challenges
- Support younger and older people

City development

- Promote and position the city to compete
- Develop the city's infrastructure and improve connectivity locally, nationally, and internationally
- Drive the physical and cultural regeneration of the city centre
- Deliver key strategic physical projects and policies
- Attract more tourists
- Protect and enhance our environment and built heritage

Working and learning

- Address educational inequalities and increase skills attainment
- Address barriers to employment at a structural and personal level
- Enhance and increase the skill levels of our residents and attract and retain even more skilled people
- Match people and skills to opportunities across Belfast
- Reduce poverty and economic inactivity



City & Neighbourhood Services

People and Communities Committee

(20 Members)

Local Regeneration
Environmental Health
Waste Management
Parks and Allotments
Playgrounds
Cemeteries
Cleansing
Local Grant programme
Community Services
Community Safety

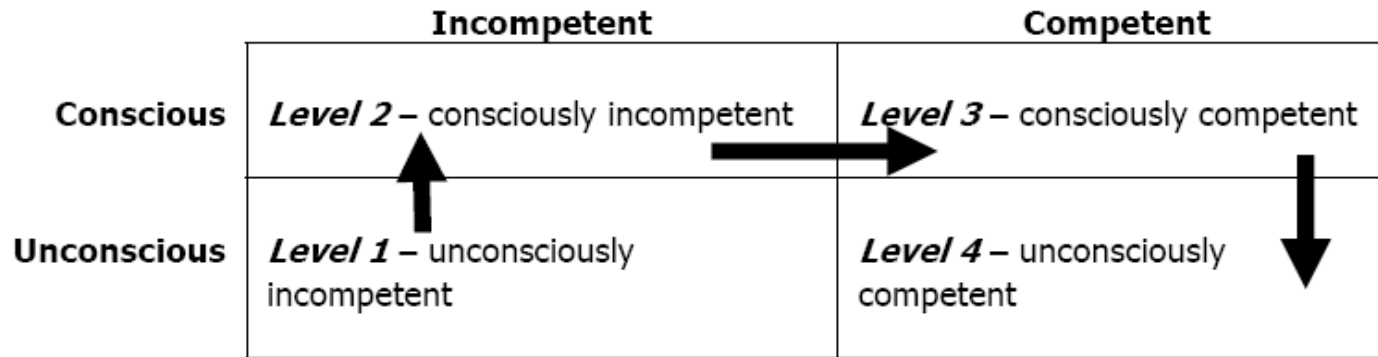


1. Deliver city & neighbourhood community safety programme
2. Deliver Amateur Boxing Strategy programme
3. Finalising Open Spaces Strategy & Local Biodiversity Action plan (LBAP)
4. Change Programme
5. 10 year Strategic Waste Plan & Circular Economy programme
6. Deliver integrated good relations plan
7. Deliver & monitor Volunteering Strategy & Action Plan
8. Implement EU Peace IV programme



The Rumsfeld Model

Figure 1: Competences learning model



TOWARDS ZERO WASTE ACTION PLAN

Key areas of work

1. Improve recycling collection services for householders (more materials, better services)



2. Increase recycling through our network of recycling centres



3. Extend business recycling services



4. Use treatment facilities to separate recyclables from waste before it goes to landfill



5. Develop new recycling campaigns and community based recycling initiatives



6. Increase the amount of recyclables collected from existing waste collections



7. Collect recyclables from the cityscape (such as markets and events)



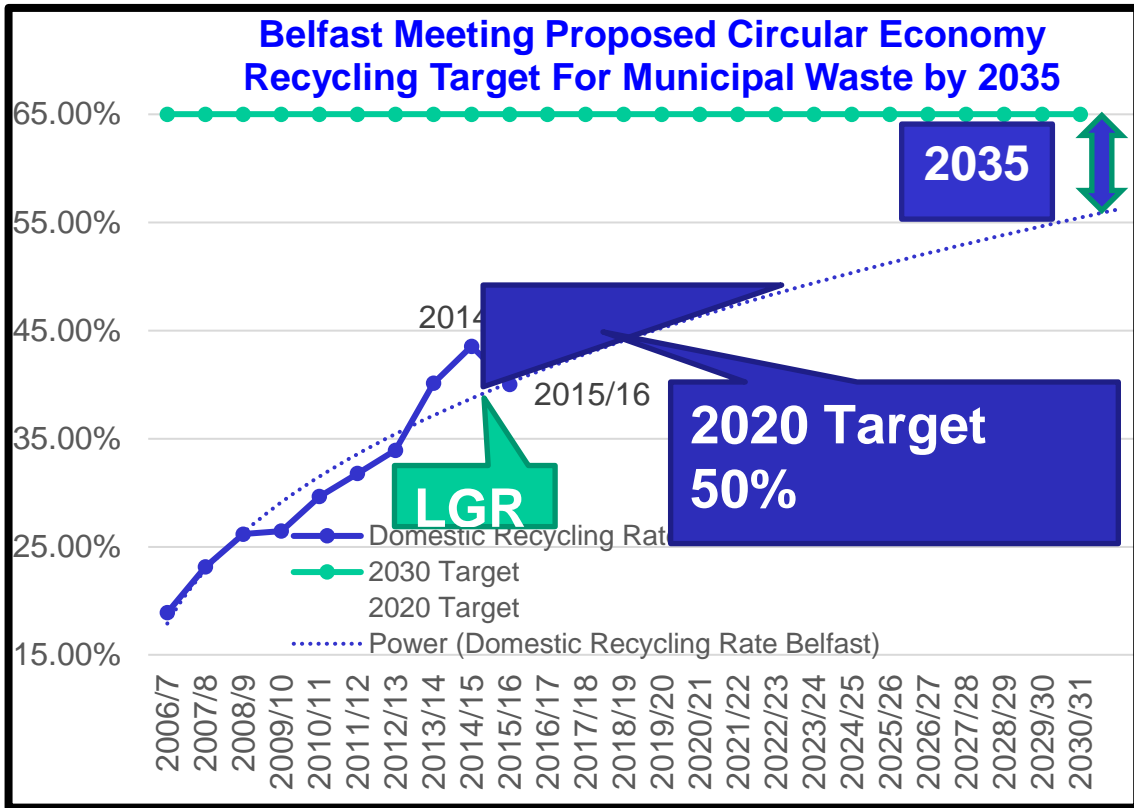
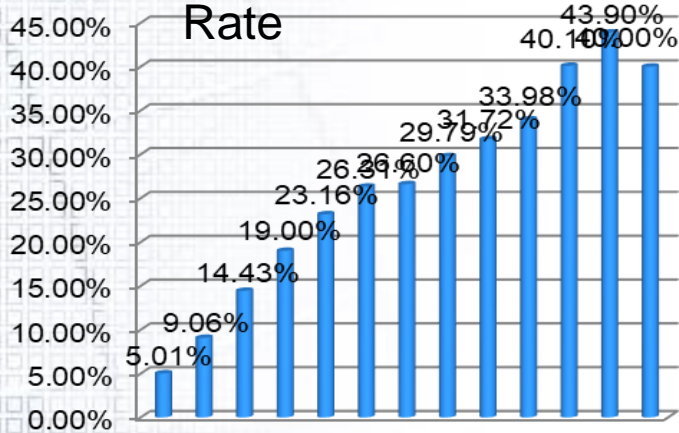
8. Increase blue bin capacity and "slim" black bins





How are we doing?

Household Recycling Rate



Challenges

- Waste Growth
- Residual Waste Treatment (arc21)
- City Centre living
- Brexit
- Reliance on contractors - VFM



EU CE Package/Targets

- EU adopted the [Communication "Towards a circular economy: a zero waste programme for Europe"](#) to establish a common & coherent EU framework to promote the circular economy.
- Turning Europe into a more CE means:
 - boosting recycling and preventing the loss of valuable materials;
 - creating jobs and economic growth;
 - showing how new business models, eco-design and industrial symbiosis can move us towards zero-waste;
 - reducing greenhouse emissions and environmental impacts.
- Increase recycling/re-use of municipal waste to 65% by 2035
- Increase packaging waste recycling/re-use to 70% in 2035 with material-specific targets set to gradually increase
- Reduce landfilling to 10% by 2035
- Reduce food waste generation by 30% by 2025;
- Introduce an warning system to anticipate possible compliance difficulties
- Ensure full traceability of hazardous waste;
- Increase the cost-effectiveness of Extended Producer Responsibility schemes
- Simplify reporting obligations
- Harmonise/streamline the calculation of the targets and improve the reliability of key statistics
- Align definitions & remove obsolete legal requirements



CE Objectives

Design Out Waste & Pollution

- In CE, design is key. Products kept in use, harmful substances removed, waste designed out & materials substituted with low-carbon, secondary & renewable materials reducing greenhouse gases along the value chain

Keep Products and Materials In Use

- CE reuse products, components & recirculate materials to preserve energy & other resources in products. Also avoids production of virgin materials & associated gas emissions, as well as end-of-life treatment.

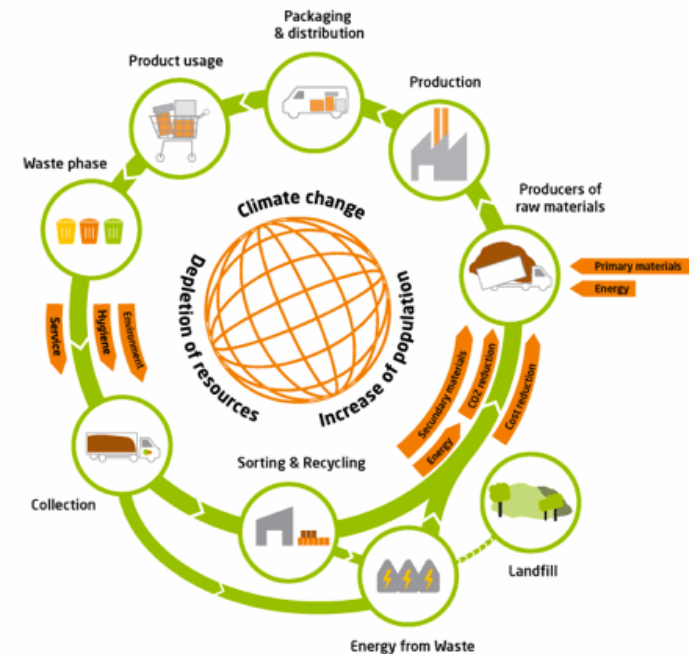
Regenerate Natural Systems

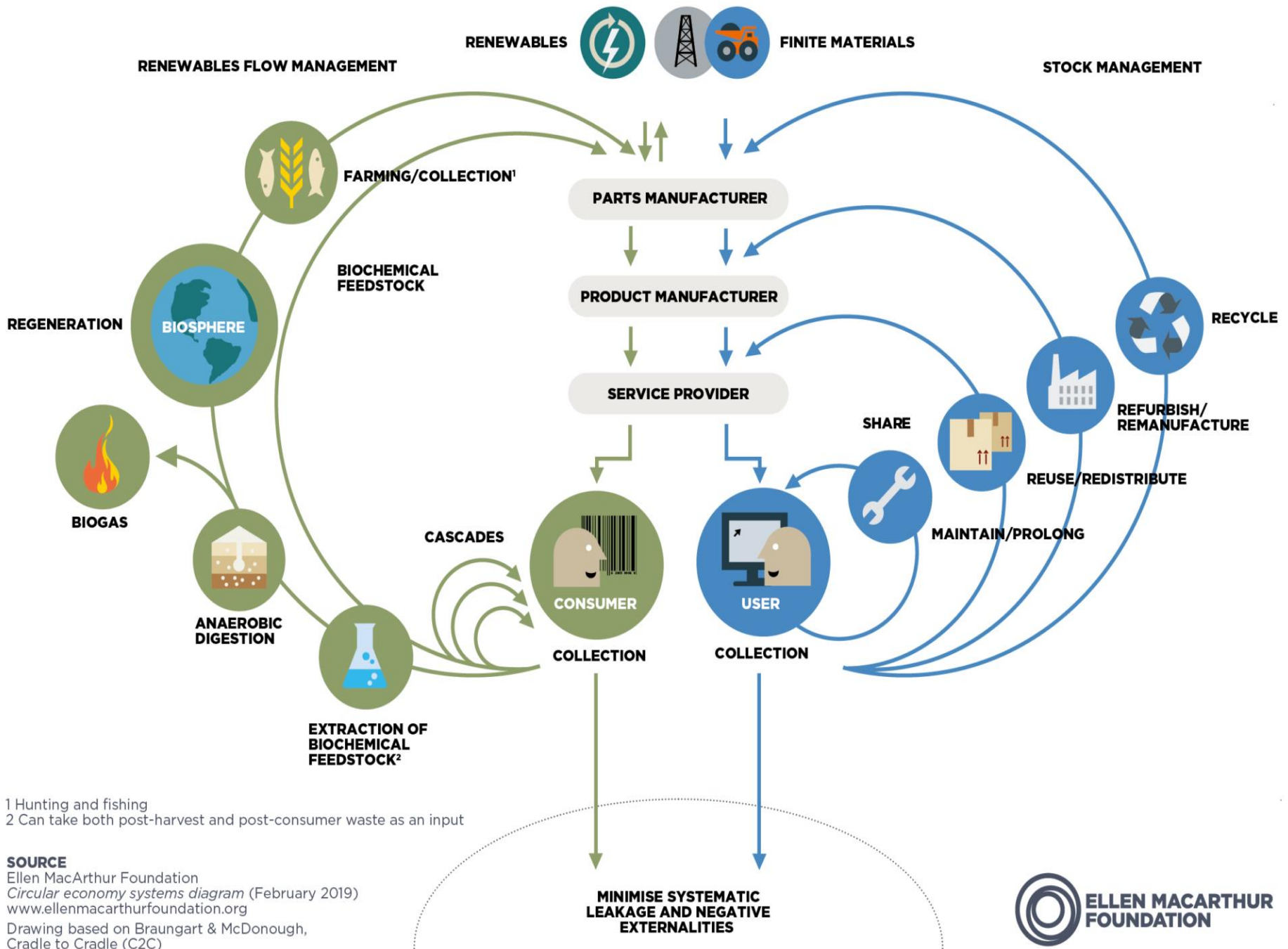
- By returning nutrients to the soil, regenerative agriculture can enhance natural systems, improve soil health & sequester carbon.



Circular Economy

- The linear “*take, make, dispose*” model relies on large quantities of easily accessible resources & energy &, as such, is increasingly unfit for the reality in which it operates
- Working towards efficiency will not alter the finite nature of their stocks but can only delay the inevitable
- A change of the entire operating system seems necessary
- <http://www.ellenmacarthurfoundation.org/circular-economy/>





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

SOURCE
 Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
 Drawing based on Braungart & McDonough,
 Cradle to Cradle (C2C)





Managing waste, delivering value, supporting jobs

Optimisation of Waste to 2025 & Beyond

The Waste Framework

Managing waste, delivering value, supporting jobs

A paradigm shift is needed – to recycle around 20,000 more tonnes per annum. This will require different waste collection schemes, new infrastructure and changes to our behaviour.

...if everyone put the correct items in the correct bin, the Council would save almost £2 million per year and boost the recycling rate by a staggering 20% !

stronger engagement with the public is needed at key stages in implementing the Waste Framework; education and promotion, public recognition, and incentives will be essential but, ultimately, enforcement may be required.

We need to create a step change to our recycling performance (bringing with it efficiencies), and **create environmental, social and economic benefits for Belfast.**

The waste produced in Belfast can be harnessed to produce new goods and energy, which could drive local infrastructure and economic development. This has been coined as the **Circular Economy** and deals with the leakages of valuable resources – waste from the local economy.

Waste Framework

Collections



Infrastructure



Behavioural

Change



Technology



Managing waste, delivering value, supporting jobs



Council Steps

- Waste Framework
- Resourceful Belfast – Partnership with WRAP
- Collaborative Network 1 & 2
- Circular Economy in Corporate Literature
 - Local Development Plan

