



TOWARDS THE CIRCULAR ECONOMY

A B R I E F I N G P A P E R

Julie's Bicycle
SUSTAINING CREATIVITY



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INTRODUCTION

All over the world the best design and creative minds are dedicating themselves to waste and how to get rid of it by transforming the way we design, use and dispose of stuff. In the UK alone, our households produce 27.3 million tonnes of waste and we recycle under half of it¹.

The bewildering images of a tiny seahorse latching onto a cotton swab, the Great Pacific Garbage Patch, and albatross snared in fishing lines have done much to raise awareness. Thanks to growing public concern, waste is top priority on the political and business agenda. So, how can waste be minimised, de-toxified and transformed into valuable and restorative resources for us all?

The circular economy – so-called because its core principle is regenerative – is designing waste and pollution out of the system and creating an economy that allows natural systems to rejuvenate.

Creativity sits right at the heart of this challenge, offering the cultural sector an opportunity to contribute to material and social design innovation.

Potential benefits of the circular economy are plentiful: economic, reputational, environmental, social, but also artistic – creating opportunities to rethink and innovate across cultural practice. The Ellen MacArthur Foundation estimates the **circular economy** could generate over \$1 Trillion for the global economy by 2025, and The Waste and Resources Action Programme claims it has the potential to create an extra 3 million jobs in Europe by 2030².

1. DEFRA – [Digest of Waste and Resource Statistics](#) – 2018 Edition

2. WRAP – [Economic Growth Potential of More Circular Economies](#) report

WHAT IS THE CIRCULAR ECONOMY?



RSA Great Recovery. The Great Recovery was a project by the RSA working with Innovate UK which ran between 2012 and 2016.

The circular economy, as opposed to the current linear economy, is based on three core principles:

1. Design out waste and pollution



2. Keep products and materials in use



3. Regenerate natural systems



The current linear model is based on extraction, manufacture and disposal of resources i.e. “take, make, use and dispose” which is creating waste and pollution at each stage of the process. Choices made at a product’s design stage profoundly influence the capacity to minimise or eliminate the waste and pollution created throughout its life cycle i.e. how it might be reused, repaired, taken apart or recycled.



The circular economy, on the other hand, conserves the utility of products and resources, extracting their maximum value and recovering and repurposing materials. Products remain functional for as long as possible through continuous cycles of production and re-use.

The circular economy designs for longevity and efficiency of all resources - including energy, a valuable resource which is needed at nearly every stage of a product's use, including powering recycling and material recovery processes and machinery.

MATERIAL FLOW ANALYSIS: DGTL FESTIVAL



In 2017, Netherlands-based consultancy Metabolic undertook a full materials flow analysis at DGTL Festival in the Netherlands. The project was funded by a Dutch government 'green sector deal' to tackle waste in the festival industry. Using the festival as a pilot 'closed system', it was hoped that this analysis could underpin a zero waste 'circular festival' strategy for DGTL (amongst other festivals), and provide important insights into improving material flows in the city of Amsterdam. It found that decoration & construction waste was one of the largest categories of waste generated on site (up to 47% of the total waste), composed mainly of wood (4,600 kg), plastic (1,800 kg), steel (900 kg), and other (1,800 kg), which was reused/recycled/down-cycled/incinerated depending on the material category.

MATERIALS FOR THE ARTS (MFTA)



MftA is a partnership program between the New York City Department of Cultural Affairs and the Departments for Sanitation and Education. The MftA site collects a wide variety of reusable materials from businesses and communities, making them freely available to non-profits, civic organisations with arts programming and public schools. They also offer a wide variety of events, workshops and classes to help people see and experience creative reuse i.e. rethinking our relationship to "waste" and repurposing materials unnecessarily bound for landfill.

www.mfta.org

BEYOND MATERIALS

A circular approach to the economy enables a holistic understanding of waste impacts, addressing wider social challenges by accounting for ecological, social and cultural indicators alongside financial metrics. This broader scope minimises negative – and often unintended - consequences (known as burden shifting) that might occur as side effects, for example the loss of biodiversity as a result of deforestation or the contamination arising from material extraction that is threatening the health and subsistence farming economies of communities.

“*The circular economy is a new economic model for addressing human needs and fairly distributing resources without undermining the functioning of the biosphere or crossing any planetary boundaries*”³. 🌱

3. Metabolic. www.metabolic.nl/the-seven-pillars-of-the-circular-economy

PINEAPPLE LEATHER ANANAS ANAM



Piñatex is an innovative natural textile made from pineapple leaf fibre and offered as an environmentally-friendly alternative to leather. The fibres are extracted from leaves which are the by-product of existing agriculture, meaning that the production of Piñatex does not call for the use of additional environmental resources. This process reduces waste discarded from the harvest of pineapple crops and creates an additional income stream for farming communities. Once the leaves have been processed, the leftover biomass can be used as a natural fertiliser or biofuel. Aside from being environmentally conscious, Ananas Anam (the creators of Piñatex) work to support rural communities by working directly with farming cooperatives to create an additional stream of income to pineapple farmers.

www.ananas-anam.com

WHAT ARE THE BENEFITS?

A transition to the circular economy will result in a systemic shift in how we value and construct our social and material world. This transition cannot be done in isolation and all parts of our industrial and cultural economy will need to contribute; but the long-term risks of the current linear economy (resource depletion, toxicity, ecosystem threats and accelerated climate impacts), compared to the benefits of the circular economy, make for a compelling opportunity to re-shape our material world.

Immediate benefits include:

Increased efficiencies and reduced environmental impacts e.g. carbon emissions

Reduced procurement costs (e.g. collective procurement) and waste disposal costs

Improved profile and reputation through demonstrating ethical leadership and commitment to social and environmental causes

Audience development and the ability to inspire not just audiences and visitors, but other sectors, cities and policy-makers worldwide

Improved business resilience through efficient internal resource management and on-site sales of ethical premium products

New and strengthened external partnerships with ethical and low-carbon supply-chain businesses, education, R&D, third sector etc.

Strengthened relationships with local communities and opportunities to dovetail with inclusion and social sustainability campaigns and initiatives

Creative and innovation opportunities for designers, makers and construction professionals to evolve their practices and develop new skills

HOW TO BEGIN?

Transforming the economy won't happen overnight, so below are some starting points aligned to the principles of the circular economy:



1 Build environmental and social sustainability clauses into your procurement policy

2 Consider hiring, borrowing, or sharing resources before you buy something new

3 Choose products that are long lasting and that can be reused, repaired, recycled or biodegraded i.e. rechargeable batteries

4 Minimise waste through informed procurement choices i.e. understanding the volumes of materials coming into - and existing within - your workplace, optimising stock management

5 Design and build production and exhibition items for disassembly and re-use, recycling scenery into new productions where possible

6 Consider rain water harvesting for maintaining gardens and indoor plants, as well as cleaning artist tools etc.

7 Buy 'green tariff' electricity from your current provider or switch to a 100% renewable energy provider e.g. Good Energy

CLASSICS FOR A NEW CLIMATE



The Young Vic Theatre has run two productions under its 'Classics for a New Climate' banner - created to push thinking about how theatre productions could be approached sustainably. Alongside energy efficiency and transport initiatives, a particular focus was put on the physical materials of the shows, from design to end-of-life. For the first production, *After Miss Julie*, most of the props were sourced from previous shows, sourced locally from markets, or made from second-hand or recycled material. The costumes were refashioned from vintage clothing or 1940s fabric found in local markets. For the second production, *La Musica*, 50% of the set (predominantly plywood) was recycled from another Young Vic production. A key focus was on local sourcing, with associated distances and journey times 75% lower than for other Young Vic productions of a similar scale. After the production, 80% of the wood used for the production was recycled and 15% reused, 90% of the steel was recycled and 10% reused.

BALTIC



BALTIC Centre for Contemporary Art, in Gateshead, has written a specific policy document for creating a sustainable exhibition. Within this they addressed their exhibition build: they have developed a system of re-useable wall panels, designed exhibitions with minimal construction, re-used wood and steel where possible and specified Forest Stewardship Council certified wood. In the case of transporting artworks; they manage the geography of exhibitions intelligently so that objects are not transported needlessly, consolidate shipments, re-use crates and choose sea or rail freight options over airfreight where possible.

FURTHER READING

[The Ellen MacArthur Foundation](#)

[RSA / Innovate UK: The Great Recovery Project](#)

[Metabolic – The Seven Pillars of the Circular Economy](#)

[Waste Management for Buildings](#)

[Waste Management for Events Guide](#)

[Productions and Exhibitions Guide](#)

[Electricity Factsheet \(UK\)](#)

[Sustainable Procurement Guide](#)

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